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EDITORIAL

MEASUREMENT OF PHYSICAL FITNESS[1]

Today the national demand of physical education is for physical fitness. Our armed forces want results, not promises and good intentions. Communities must be fit to meet the demands of these times. It behooves our schools to evaluate their results. However, measurement of fitness developed in 32 weeks, 2 days a week, one hour a day, 45 minutes to the hour, only 25 minutes of which could be said to be developmental if *every one* were active every minute must be satisfied with small gains. If every boy and girl got this much time the story is bad enough but many high schools offer only one year of physical activity and some none. In elementary schools the story is worse. Thus in little over 17 hours a year (less than one day) our superintendents demand miracles.

Present draft statistics reveal rejections are essentially due to deficiencies of teeth, intelligence and vision, none of which can be rectified directly through physical education. A real health examination *at least once* in each institutional level (every 3 years) would help attain, and follow up further assure, improvement in these defects. Upon such a base the health and physical education program might make a reasonable contribution, better than nothing, but not as effective as is possible if adequate time were allotted (at least one daily period.)

In the meagre time allotted, if testing is employed (and it should be), tests must be carefully evaluated. They must measure what they purport to; this measurement must be accurate; averagely trained testors must be able to get comparable results in the same situation (properly standardized directions for giving the tests will aid in this respect). The results must be usable in the program. To assure this maximum use, norms must usually be available against which to check our results. The more interesting the tests can be to the pupils and the more educationally sound the test activities themselves are the more justifiable is their use. Withal, the tests must be economical of cost, time, and energy.

Recent careful and complicated studies reveal, for us who are unversed in the mysteries of research, that the essential factors relating to success in physical performance in general are: 1. Strength, 2. Velocity, 3. Dead Weight, 4. Motor Ability, and 5. Height. To these might be added factors revealed by present conditions to be essential namely: 6. Endurance, 7. Hearing, and 8. Vision. Our tests should determine gains, losses, needs, or capacities in these factors.

Valid available strength measures are: Rogers' Strength Index, MacCurdy's Physical Capacity Index, and his Force Index. Less valid but far more economical in all respects and still worthy of use is Larson's Dynamic Strength Test, consisting only of chinning, dipping, and vertical jump.

Velocity can be cheaply but adequately measured by short dashes, the vertical jump, standing broad jump, and the 8-lb. shot putt.

Weight and height are most adequately accounted for by employing McCloy's Classification Index ($20 \times$ Age $+ 6 \times$ Height $+$ weight in pounds) or any of the several highly correlated similar indices.

Motor ability can best be measured by McCloy's Iowa Revision of the Brace Test, Johnson's Test of Motor Educability, or Humiston's Test of Motor Educability. Each of these tests meets all of the forementioned criteria quite well. McCloy's four general motor performance or capacity measures each merit consideration for their indicated purpose.

The Indiana law requires that elementary pupils be given the Audiometer hearing test. For vision, a splendid diagnostic measure is the Keystone Telebinocular vision test by Betts. A *good* school system should employ both of these measures.

For many of the elements of the above factors, achievement scales for various age, height, weight groups are available in all levels for both sexes.

Finally, in a recent unpublished but reliable study by the editor, a means of classifying students for physical education classes has been validated. This method is not only quite inexpensive but also most simple. In essence, it consists of 1. ranking all pupils according to their scores in Larson's Dynamic Strength Test (chins, dips, and vertical jump), 2. breaking this range into two or three (according to the size of the school) equal groups, and 3. sectioning these groups into halves according to their scores in McCloy's Classification Index. By this means pupils are grouped according to general capacity, for safety by hulk and maturity, and also somewhat by social interests. The former classification is established primarily for boys but a similar study (see page 31) just completed reveals that a primary grouping by Humiston's test, and a secondary grouping by California Interscholastic Federation (C. I. F.) index is nearly as effective for junior high school girls.

[1] Presented at Indianapolis meeting of I. A. H. P. E. & R., March 28, 1942.

CALIFORNIA REVISES ITS PHYSICAL EDUCATION LAW

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Many of the laws written between 1915 and 1920 providing compulsory physical education in the public schools have been found in the light of the experience of the past 20 to 25 years to require some changes. Educators, and particularly physical educators, felt that the spirit and letter of the law in many states was not actually being carried out. This was reflected particularly in various aspects dealing with the personnel and program of physical education being carried on in the public schools of the country. The results of early draft board examinations and the emphasis being placed on national defense and now the war-time emergency bring in full relief once again the necessity for physical fitness, and adequate methods of a large-scale basis to develop a high state of physical efficiency among the young men and women of our country.

Recognizing from daily experience the fact that the California law originally written in 1917 had many features that were in need of change, State Director of Physical Education, W. H. Orion, called a meeting of several leaders in the physical education field and proposed that the law be brought up to date. This resulted in the initiation of legislation for the 1939 state legislative meeting. The introduction and passage by the California Legislature of Assembly Bill 1690, which became a law in September, 1941, has improved many defects in the old law and gives California what may be considered one of the best and most up to date pieces of legislation affecting the physical education profession.

Professional people will all be interested in some of the specific changes. They may be summarized briefly as follows: The aims and purposes of the course in physical education were so well written by Clark W. Hetherington when the law was first established in 1917 that only one addition was made to his original provision. That included the addition of the words "and safety" to the sentence "to secure scientific supervision of the sanitation *and safety* of school buildings, playgrounds and athletic field and the equipment thereof." The great emphasis in recent years on the safety factor in connection with our program and the many law suits brought about by accidents to school children in connection with athletics, playgrounds, and school buildings, seemed to make it advisable to include this word in the statement.

In the elementary schools of California it has been required that 20 minutes in each school day shall be devoted to courses of physical education. The statement with reference to elementary schools now reads, "All pupils enrolled in the elementary schools, except pupils excused therefrom, in accordance with the provisions of this article, shall be required to attend upon such courses of physical education for an instructional period *in each school day*, which shall *not be less than 20 minutes, exclusive of recess and the lunch period.*" It was found that in many elementary schools a part of the recess period and a part of the lunch period was frequently used by principals and teachers to make up the 20 minutes of the period allowed for physical education.

Much confusion existed in the interpretation of a secondary school which was considered a four-year high school in 1917 when the law was first written. This was due to the fact that so many schools in California operate on the 6-3-3 plan.

To correct this the new law now reads, "All pupils enrolled in the *junior or senior high school*, except pupils excused therefrom in accordance with provisions of this article, shall be required to attend upon such courses of physical education for *an instruction period* in each school day which shall be *not less* than the length of the regular *academic periods of the school.* This does two things viz.: it clarifies the junior and senior high school situation, and it requires daily classes in physical education. The law previously stated that there should be courses in physical education for at least two hours each that week school was in session.

A new section was added to the school code as follows: "All pupils enrolled in the junior colleges, except pupils excused therefrom in accordance with the provisions of this article, shall be required to attend upon such courses of physical education for a minimum of 120 minutes per week. Where adequate facilities are available a daily program is recommended."

Junior colleges provide two years of training beyond the high school. They are of recent origin in the public school system but have grown rapidly in California. No provision was made for them when the Physical Education law was first written. This illustrates one example of why it is necessary to bring laws on the statute books up to date.

Another new section classifies all excuses under this one provision. It reads as follows: "The governing board of each district may grant temporary

exemption to pupils who are ill or injured where a modified program to meet the needs of said pupils cannot be provided, and to pupils while enrolled for one-half, or less, of the work normally required of full-time students. Permanent exemption may be granted a pupil who has reached, in the case of an elementary school or high school pupil, his twenty-first birthday, or in the case of a junior college pupil, his twenty-fifth birthday, or a pupil enrolled as a post-graduate student.

The significant fact about this new law is that there are really no excuses from physical education for the average normally classified pupil. The assumption now is that a modified program will be put in effect for those who are ill or injured, such as a prescribed rest period, if that seems advisable. In the event this is not possible temporary exemption may be granted.

In many California schools certain pupils are permitted to work after reaching 16 years of age. The law requires them to attend school until they have completed high school or until they have reached their 18th birthday. Continuation schools are provided for these pupils who must attend school a certain number of hours per week. This schedule is arranged so as not to conflict with their outside work which often is the means of supporting a family. Other pupils who are taking graduate courses frequently come under this classification. Under the old law they were required to take physical education. Now they may be exempted.

Permanent exemption is now granted to pupils who are obviously out of their age group. There were exaggerated cases which were few in number but which created special problems under the old law.

One of the most significant changes with reference to excuses or exemption was the dropping of the Cadet Corps provision. Heretofore pupils regularly enrolled in high school cadet companies were excused from physical education classes.

No such provision is now made. It was found that school officials and military authorities were almost unanimous in their feeling that it was better to get the boys in good physical condition by means of the prescribed physical education program and turn over the military training to military authorities at the time and age prescribed under the Selective Service Act.

Selectees are not called now until their 21st birthday. Even though this age limit should be lowered to 18 years, it would still not affect the great mass of the high school population.

Training institutions will be interested in the change made with reference to personnel. The law now states that, "when the number of pupils in any city, or city and county, or school district is sufficient, the *governing board* of such city, or city and county, or school district shall employ a competent supervisor and such special teachers, trained in physical education, as may be necessary *to obtain the aims and purposes set forth in this article.*" The importance of the word "trained" is significant in this new law. Too often teachers with little or no training at all have been assigned to teach physical education.

Another important provision makes it possible for governing boards of two or more contiguous school districts, by written agreement, to join in the employment of competent supervisors and teachers trained in physical education with salary and expenses incurred on account of such instruction apportioned as the governing boards concerned may agree. This should stimulate the programs in the small schools and particularly in the rural areas.

The people of California now feel they have a modern, streamlined vehicle capable of producing healthful, vigorous citizens through wholesome physical activities conducted on a daily basis from the first grade of school through the high school under trained leadership. This in itself is indeed a long step forward.

It now remains for administrators to put this law in practice. Under the stimulus of a national emergency such as exists at the moment, this should not be difficult to accomplish, not forgetting, of course, that we need strong and healthy youth just as much in peace time as in war. The immediate effect in California has been a considerable increase in personnel to carry the increased load, especially in junior and senior high schools that were meeting the minimum requirement of 120 minutes a week prescribed under the previous ruling.

Anyone interested in the full text should write for Assembly Bill 1690 by Sawallisch to the Bill Room, State Capitol, Sacramento. The State Department of Education has just published a pamphlet containing all recent changes in school laws for California. The provisions of this bill are found in this booklet, "Laws of 1940-41 Relating to the California Public School System." Bulletin: California State Department of Education, Vol. 10, No. 9, August, 1941. Pages 26-28.

TEAM GAMES AND WORLD CITIZENSHIP

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It has been said that the world is so inter-related one could start with any minute part and follow a line of thought which would soon lead to all fields of knowledge. Let us, for example, consider a drop of water. It is made of H_2O. The way two molecules of Hydrogen are bound to one of Oxygen, the methods of separating them, the ionization of water, would soon lead us on to the fields of chemistry, organic and inorganic. When we consider the use of water in industry, imagination could lead us into the field of electricity, dynamics, and all of physics. With a consideration of water in organic unions, we find ourselves in the fields of botany and zoology. The human body is almost 70% H_2O. No food can be made a part of the body except as it is in solution, and this requires water. No secretion from glands in the body can take place without water, and our secretions determine pretty much how we are going to feel and act. The brain cannot function except as it is bathed in cerebral fluid, which is largely water. Imagination, appreciation, reasoning, cannot be carried on without water, and so, we can start from our drop of water and find ourselves wandering in the fields of Science (natural or social), of Art, and of Philosophy or Religion, long after we have forgotten our starting place. And these are not distinct fields, but are all inter-related. It may be Art that puts the pigment on the canvas, but Science developed the canvas and the pigment, and Philosophy determined the ideas of the artist.

But even though there is a connection, a path, between each little experience of ours and all that is known (and unknown) of life, we often do not see even the beginnings of the path, and we seldom explore it even for a little way. When we do draw conclusions we sometimes are satisfied to draw them with too little experience. Miss Applebee recently told of a little English city boy who had been evacuated to the country. For the first time he saw the farm life, so familiar to all country children. Heretofore his only acquaintance with pigs had been with toy pig balloons. When he saw a sow feeding her litter of young he exclaimed, "Oh see that big pig being blown up by six little ones!" We often have too little experience to draw correct conclusions, but more often we do not think clearly about the experiences we *do* have. We go through our activities without a reflective thought. In contrast, we read Tennyson's

"Flower in the crannied wall,
I pluck you out of the crannies.
I hold you here, root and all, in my hand,
Little flower—but *if* I could understand
What you are, root and all, and all in all,
I should know what God and Man is."[1]

Let us consider a team game such as basketball as a starting point and try to discover a relationship between it and world peace. We could use any team activity. It doesn't even need to be in our field. It could be in group music, as in band, orchestra, glee clubs, and it could be in any project or experience where people are all doing different things, all aware of the fact that what they do of themselves is little, yet what they do with the group is so important that the group would be greatly crippled, if not entirely disintegrated, if they did not play their respective parts. The group is also made ineffectual if some try to play more than their parts, making their bass voices heard, for instance, when the soprano solo should be carrying the notes, hogging the ball in a difficult play when another forward is free and in position to make a goal. The essence of a team game is the merging of self into a larger group, doing your part; more of the time just being alert, ready to do; helping all others to do their parts, yet never doing their share for them; trusting them, fitting into their plays, winning or losing, not as an individual, but as a member of the team. Our love of team games, and our ability to enjoy identifying ourselves with a group, losing when they lose, or giving up our independence and freedom to work for the good of the whole, does not come to us until we have reached the age of twelve or thirteen. Up to that time, the average child has enjoyed trying himself out against others and he has enjoyed the feeling of accomplishment. He loves to carry the ball himself, to be elected captain, to fight or run or jump, to win, or to beat someone.

About the age of twelve or thirteen it is usually possible to get boys and girls interested in uniting with others in gangs or clubs, and they actually get joy out of giving up their plans or their spectacular or grandstand plays, if it helps the team. There is evidence here of a sacrificial joy. We have watched these things, but haven't thought much about them. We have failed to make the connection between the development of these feelings and the

[1] "Flower in the Crannied Wall"—Alfred Tennyson.

development of good citizenship, especially of good world citizenship. We haven't seen the inter-relationships. We haven't thought enough. There is a connection between these feelings and the endocrines, and team games, and world peace.

The child's physiological development and the emerging of his mature feelings are somewhat dependent upon the glandular secretions, or endocrines. Although one cannot separate the effects of the various chemical compounds, one can safely suggest that there is a relationship between a normal secretion of the adrenal gland and the initiative of the child, or his desire to enter into activity and to try himself out against others. Without this secretion, he is apathetic and lacks ambition. About the age of ten to twelve, this desire to fight, to compete, to excel as an individual, is usually marked. Some say this feeling is definitely related to the instinct of self-preservation. This would seem to be the age for the greatest emphasis on individual activities. This is the time to encourage individual competition. The average individual is not capable of feeling any joy in sacrifice at this time. Although it would seem wise to develop techniques which will be used later in team games, the child's delight in the game itself comes from the feeling of self-importance and power. Thus, the child of seven or eight, who is learning the gracious manners of home and school does not gain his satisfaction from making others at ease, but does gain satisfaction in measure as he wins praise and approval from others which gives him a feeling of self-importance. He does not enjoy his football or basketball because of the feeling of helping his team and sacrificing for a group—but because of the feeling of power over the ball and gain in his own skill. If, at this age, he practices the techniques which older people know he will need and desire in later relationships, the time will come when his easy poise and manners, or his skill in handling the ball and dodging an opponent, will bring him emotional satisfactions—not so much because of the feeling of his own importance and skill, but more because of the feeling that he is contributing to the group to which he belongs.

Every child should have the satisfaction of excelling in at least one activity. (And he should have the experience of defeat, which is as important for one's development as is that of excelling. Both experiences need to be kept in balance.)

But how long should one continue to emphasize individual activities? Throughout life the adrenals secrete, and we owe much of our force and initiative and desire to match our strength with others to their secretions. But about the age of twelve to fifteen, the gonads begin to secrete. For a long time we thought that the only function of these glands was to make reproduction possible, but this is not the fact. In human life, anyway, it is not even certain that this is the most important function. Upon the secretion of the gonads depends those instincts which will make an animal protect its young even at the sacrifice of its own life. This secretion is, perhaps, the main factor that gives rise to the vague feeling of wanting to merge oneself in a group or gang or team. This desire comes about the age of twelve to fourteen. There is a mustness in this feeling which exceeds the *mustness* of the home. The feeling of joy in sacrifice for the group is beginning to develop. The endocrines and the finest spirit of team games are certainly related. There is a feeling of satisfaction in responsiiblity for and protection of others. Upon the development of this feeling depends the bulwark of democracy. If the simple, essential techniques have been mastered earlier, then this feeling, made possible by physiological development, can be utilized to develop the habits and attitudes of responsibility, of cooperation, of faith in others. This is the time when team games can be developed with advantage. The individual activities can well be pushed into the background now. Some of them will come to the fore again when their main value has ceased to be developmental and is merely recreational.

The child, of course, does not see the implication of all this. It is only after one has been over a road that one *can* know the beauties, and also the possibilities for disaster which lie along the route. The guides or coaches must know the road. They may take advantage of these vague beginnings which make possible the development of a worthy member of a home and of a society in which all are united, one and indivisible, with each sharing responsibility for the good of all.

To fail to give every child of six or eight the individual experiences which will give him a feeling of individuality, power, and self-importance and self-mastery is to fail to give him the basis for worthy team membership. But, to fail to give every youth between the ages of fifteen and twenty-five a rich experience in team games, under leadership which makes the most of the possibilities of extending both the fighting spirit and the team spirit, is to lose the opportunity for one of the more effective laboratory experiences in the training for democratic life, with all that it implies of ideals worth fighting for, and of cooperation and common good, equal privileges, and responsibility for each other.

World peace depends upon our extending the feeling of the team beyond the narrow group. Individuals must go further in their feeling of unity than did the man who prayed, "Lord, bless me and my wife, my son John and his wife, us four and no more. Amen." We must go further in this feeling of unity and responsibility for others than the supporters and followers of a school team, who consider it legitimate to destroy the property of a rival school. We must go further than Stephen Douglas,

who said, "My country, right or wrong. May she always be right, but my country, whether right or wrong." We must go further than the leader of a nation who says, "My *race*—and may all other races be destroyed or subjected."

World peace will not come because of strong racial governments which can crush out small nations. It will not come because of attempted isolation and desire of peoples to lives their lives as individuals. It will only come as children are trained through competitive enterprises of childhood, to assert themselves and develop their own initiative and individualism, and through cooperative enterprises of youth to identify their welfare with the welfare of larger units.

The ability to extend this team feeling depends upon the education of large numbers of individuals. The students of today are our next teachers of young people. They must, themselves, see, and in turn help their students to see, the connection between their actions and world peace. If we ever have this unity and responsibility of all, we must realize it will come because we are playing our little part in a larger and larger team. It will *not* come just because of desire, nor because of the work of a few who act as defense at the home or goal. It will not come because of "rugged individualism" and ability to excel individually. All of these things play some part in the foundation of peace, but they do not build the superstructure.

In our field, some have recently advocated more attention to the students who have considerable skill in individual activities, that they might perfect themselves and find more opponents to try their mettle. There are arguments for such a program, but its proponents do not make use of enough factors. They do not go far enough. They do not open up the path or connection between our experience and the larger fields of knowledge. We have experimented with children in this narrower, circumscribed, individual way. We have insisted that they be uninhibited. We have used them as human guinea pigs, and too often we have made of them human "gimme" pigs, wanting all that was coming to them, wanting security and rights for themselves, but not taking the larger responsibility for the good of all. We have unwittingly contributed to the feeling that the parent furthered when she took her precious Sonny-Boy to the public school and gave the teacher a long list of instructions. "My Sonny-Boy is so sensitive," she explained, "don't ever punish him. Just slap the boy next to him. That will frighten Sonny-Boy." We have talked of "rugged individualism," and independence, and aggressiveness, all of which are good. But we have failed to balance them with a feeling of identification with the larger groups, so that the citizen of the wealthy street will see that he cannot "win" while there are slums and poverty in the community. The law-abiding citizen will see that he is losing if he cannot help to set up the conditions which make it possible for others to be law-abiding. The citizen educated in the line of his interests will extend his education to others and help others to have opportunity according to their interests.

If we are committed to a society which rests both upon the development of the individual as an independent, thinking being, capable of determining his own line of action and seeking his own ends, and also upon the unified development of the group, which identifies the welfare of the individual with the welfare of the world, with each member taking responsibility for the good of the whole, and each member able to modify his own reactions to enable himself to unite with and to progress with the whole, then the child needs to develop independence of action, an ability to compete with others with tenacity and endurance, but he also needs an ability to cooperate with others, and to merge his interests in the larger interests of the whole. In developing the balance necessary, we can use as our tools both individual sports and team sports, but we must follow them in harmony with the physiological growth of the child. The challenge to all is to use these tools with intelligence, and a purpose committed to world citizenship.

METHODS FOR THE IMPROVEMENT OF CLASSROOM INSTRUCTION IN INFORMATIONAL HYGIENE

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The ultimate point of view in teaching hygiene must be centered in the individual because the health of any individual depends upon his behavior. Methods of developing a self-directing ability and a consciousness of conduct as a cause is our goal. This development of consciousness is only a means and it has a two-fold purpose:

1. The development of emotionalized ideas, ideals and attitudes, in other words, impulsions toward healthful behavior.
2. Self-direction in the health practices growing out of these ideals.

In order to become self-directing the student must learn where to turn for valid information in

solving his own health problems. The solving of life situations call for interpretive power, it demands the ability of the student to think through and find the solution for his own health problems. It takes interpretive ability to make wise judgments in changing health situations. The methods used in the classroom should have as their objective the assistance of the student in developing the ability to meet new situations and to think or judge according to his own individual needs.

Classroom methods, it would seem, ideally should not be organized as formalized courses, but rather there should be an organization of instructional materials by a teacher with sufficient knowledge of subject matter to enable him to arouse the interest of the student in hygiene as an instrument for solving his life situation.

Hygiene is not a subject that can be taught mechanically. The teacher must have initiative and resourcefulness as well as a real interest in the student and his activities. He must also have ability to adapt his methods of instruction to the needs of each group of students, together with a willingness to give the individual student an opportunity to follow the classroom discussion with an interview or teacher-pupil conference. It is thought by many leaders in this field that the most effective teaching is done in these personal conferences. They give the "teachable moment" in reality. We have a student seeking information and assistance in thinking through his own health problem. Valid information gives the student a basis for wise judgments developed as a result of this deliberation. Thinking the life situation gives cause and effect relationship between conduct and conditions and it should tend to develop incentives.

In discussing the following techniques of teaching hygiene, the point of view presented, it is hoped, will serve only as a point of departure for group discussion because it represents only the ideas of the one reporting. You will be able to add many tried and successful methods of improvement of classroom instruction. It is only rarely that there is but one way to accomplish anything in this changing world of ours.

1. *Lectures*

   Because of administrative problems involved in finance for facilities and personnel, the lecture method is used in many instances. The 1937 report of Committee IV on Informational Hygiene said of the lecture method, "The most used but least satisfactory method if used alone. On account of size of classes and insufficient personnel, it must continue to be one of the most used methods." As a method it should *never* be used alone.

   The use of assigned reading reports paralleling the content of the lecture, abstracts of which are handed in are of some value.

   Laboratory demonstrations and visual aids, such as charts, diagrams, pictures, etc., help which are handed in, are of some value.
   a great deal. Example—successful lecture on nutrition in which several cages of rats from the nutrition laboratory showed the effects of deficient diets given.

2. *Use of Text Book*

   There are many disadvantages of textbook instruction at the college level. A good text may be used as a basic plan or keystone of the course if supplemented with various source materials.

   Strengths of such a plan:
   1. Accurate presentation of essential facts.
   2. Orderly and comprehensible arrangement of the material.
   3. A common core of content for the class.
   4. Gives teaching and learning aids such as references, questions, summaries, etc.
   5. Of value for teacher whose background is faulty.

   Weaknesses:
   1. Narrowness of viewpoint.
   2. Slavish adherence to text.
   3. Dearth of local application.
      No necessary relationship to health situation of the student. Verbally acquired information has no necessary relation to skill in thinking through his own health situation.

3. *Class Discussions*—a most valuable method.

   Most successful in small classes. The teacher is the leader and questions are the chief tools by which objectives are realized. The questions should be clear, definite and thought provoking.

   A work-book plan may successfully implement the class discussion method. Disadvantages: More aggressive students talk most of the time unless curbed.

4. *Assigned Readings*—May be valuable if they are related to the concern and interest of the student.

   Danger, the one of student simply doing something to get a good grade and not seeing any relationship between the information read and right conduct.

   Quoting again the 1937 report, it was stated that assigned readings were fundamental "but more effective when the student is required to present results either verbally in class or in writing."

5. *Topical Presentations, Projects and Reports.*

   If the students are stimulated to following their own interest in the planning, executing and reporting of the topic or project presented, these methods may be of great value.

Precautions as to the way the report is given should be observed.

6. *Panel Meetings.*

Cooperative effort and free discussion. This type of discussion more nearly approaches the adult standard. The teacher exercises varying influence, depending on the intellectual maturity of the students. Ideally he should stay in the background.

Disadvantages: It is frequently time-wasting and relatively barren in results. The group will at times get nowhere.

Precautions:

1. Have students prepare for the discussion—avoid bluffing.
2. Assist the pupil discussion leaders in their preparation.
3. Encourage some leaders to prepare written resumé reports of the results.
4. Guide discussion if it rambles or is irrelevant.
5. Discourage over aggressive students.
6. At the close of the lesson evaluate the achievement.

7. *Demonstrations are*

of value in that the class is supplied with something real to see or touch and have explained. Such visual aids as the laboratory rats used in the discussion or lectures—or objects such as a calf heart may be used in this way.

Values: Aid in making problems more tangible, aid in presentation of new material; aid in student participation in the lesson.

8. *Motion Pictures.*

The classroom film may be used in three different ways:

1. As a preview of the topic, and introduction to present the general background of the subject.
2. As a teaching lesson to carry the burden of presenting new material.
3. As a review of summary of the topic which has been discussed.

The motion picture can in no way supplant the classroom teacher. It is merely a tool to enable her to teach more effectively. The film should be presented after adequate preparation and be followed by carefully directed discussions.

Values:

Brings events into the classroom. More instructional than field trips. Presents complicated laboratory demonstrations that are too difficult to arrange in the classroom. Whole class sees the demonstration from "close up" view.

Increased interest and enjoyment in the film motivated lesson.

Gives realistic imagery and meaning to the facts presented to the class verbally.

Dangers: Can be used only as entertainment. Teacher may not be fully prepared to get most out of the picture.

In conclusion may I again quote previous proceedings of this committee (1938, p. 53). "The curriculum in health instruction is more effective if units of work or problems grow out of the interests and needs of the students.

"Development of a good unit of instruction is dependent on the background of knowledge the teacher possesses, as well as upon his knowledge of the students and the environment. The teacher must evaluate, that is, continually challenge subject matter, methods and materials."

THE TEACHER AS ACTOR

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The question has been raised, "is the teacher an actor?" That is, does he play a part, or should he play a part, and if he does play a part, is it to be sanctioned.

Before attempting to answer the above question the word "actor" should first be defined. The common meaning of the word, as accepted today, is "a theatrical performer." Now the question at hand is not, "Is the teacher a theatrical performer?", but is he able to arouse the emotions of his pupils, his listeners. Certainly the teacher is not a theatrical performer, at least he should not be. But a good actor and good acting should arouse the emotions. That is their chief function, and this arousing of the emotions is what we expect of an actor and demand as the determining factor in good acting. An actor then, as implied in the above question, is one who can arouse and stimulate the emotions. He must of course, at times, play a part or depict a character.

Someone has said that the true process of learning is through the emotions; that learning (and memory) is much easier if there is an emotion accompanying the process. If this be true, and I believe it is, then the teacher should be an actor to the extent of arousing the emotions of the pupils or

having an emotion accompany the thought process. Recall for a moment the many happy and sad events we have experienced. The experiences of these events are the "things" we retain, for learning is but a phase of memory training. Take the boy who first comes in contact with an electric current and gets a shock, as another example. All experience is accompanied by some degree of emotion. Again take the emotions which torment one when some wrong has been done and one is conscious of it, and the satisfaction of knowing one was right, either in a problem or an answer. Satisfaction is a form of emotion.

Now in order to make teaching successful, to make it efficient, the learning process should be facile. An easy method of achieving this quality is for the teacher to be an actor and arouse suitable emotions in the children. When our emotions are aroused we are attentive, alert; we have been put in a teachable mood or condition, and this is the condition every teacher must strive for if he hopes for a successful career.

There is nothing quite so deadening as a teacher who speaks always in the same monotonous tone, or the one whose features are like an Egyptian Sphinx or the veteran poker player, or the one who has absolutely no sense of humor, or the one who is weak and lifeless. What is the outstanding characteristic of the strong and superior teacher? It is the fact that he has enthusiasm and fire, is full of life, is alive, laughs a natural laugh and enjoys it. Enthusiasm is one of the strongest forms of emotion.

On the other hand certain emotions, at times, should be suppressed, and the teacher as actor should be able to do this. She should not, however, always suppress the emotions of the child nor develop in the child the inhibition of the emotions, speaking from a constructive point of view. Personality is but a reflexion of the emotions, and one of the objectives of teaching is to develop personality. Every teacher should have or try to have a strong personality, and the behavior of this personality (teacher) is acting. The teacher who puts acting into his teaching is the better teacher.

THE USE OF COMMUNITY FACILITIES FOR THE IMPROVEMENT OF CLASSROOM INSTRUCTION IN HYGIENE

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One of the present ideals of education is to present to the pupils of our schools "life situations"; the problems of bringing the resources and experiences of the community into the classroom. To a greater degree than in other portions of the curriculum, health teaching requires this because health must be a dynamic, living thing to be of value.

There is another consideration that must not be overlooked in hygiene instruction; health is a twenty-four hour a day matter. Merely studying it will not suffice; it must be practiced. No other subject presents a similar opportunity to the pupil to be immediately and continuously transferred from his schoolroom experience into every-day existence.

When it comes to health, your pupil is not only a member of the class which studies the subject but is at one and the same time—and during all of the other twenty-three hours daily—a member of his community and, as such, living the same subject.

Is this principle of transferring the community into health instruction an idle ideal of education or of practical value? Health teachers should pay meager tribute to unattainable concepts of what *might* be done under an ideal situation. Members of our profession too frequently find excuses for sloppy thinking and slipshod methods by pointing out that they do not at the moment enjoy the ideal situation for which they are really prepared. Each teacher must take his opportunity as it occurs today with each child at this time and have a workable program right now. Those who look into the future and hope for improved situations with better materials with which to work and so on are to be commended but the best possible at the given moment must be utilized to build the health of today's class. I can conceive of no class in any school district of America in 1940 which cannot make some valuable use of its own community. Even one room rural schools have accidents in their communities; the pupils have homes, drink water, eat food, wear clothing; the families have recreation of some type; disease even exists.

Not only should the community be utilized by the instructional program but the teaching must be adapted to the particular community. The field of hygiene is so broad and the time to teach so short that it is essential for each teacher to analyze the health needs and problems of his own community. The first aid unit in a Southern California school would obviously place more stress upon treatment of heat prostration than upon care of frost-bite. A Tuolumne County school would be much more concerned with first aid for rattlesnake bite than an Oakland class. The children residing in an industrial city face different health problems from those of a college town with no industry. Palo Alto has

had no case of typhoid, diphtheria or small pox for two years but its county of Santa Clara has a quarantine on rabies—which disease needs the most emphasis? Unless suited to the needs of the pupils as measured by their daily lives, health teaching becomes decidedly superficial. It can become insidiously harmful to the actual health of the younger generation.

Community facilities may be roughly outlined as follows:

1. Other branches of the city government.
2. Voluntary health agencies.
3. The organized medical profession.
4. Business organizations.
5. Private citizens.
6. Field trips.

1. *Branches of the city government.*

a. City Health Department:

City health departments today recognize the importance of health instruction in the schools. They are eager to give assistance to any extent which will not interfere with the demands of efficiently operating their own departments. Teachers need to plan for effective use of aid from the health department. Members of the health department cannot be expected to address a class on a moment's notice nor to entertain school children at all hours of the day. Talks have been given to classes upon the work of the department by such members as the city health officer, the milk inspector, the sanitary inspector and public health nurses. Subjects which have been covered are such as: the organization of public health departments and their functions; the control of the milk supply; the control of the water supply; tuberculin testing; the proper sanitation of premises and adequate waste disposal; the work of national health agencies; the organization for the control of communicable disease.

Other valuable assistance that the health department has given has been to furnish sufficient copies of the annual health report each year for classroom use; to furnish examples of all forms used by it to be used in the unit on the work of city health departments; to secure publications of the California State Department of Public Health on various subjects; to secure material from the California Tuberculosis Association for use in study of that disease; to furnish publications of the Division of Venereal Disease of the U.S.P.H.S.; to extend the courtesy of the use of books and magazines in the public health field to teachers; and to advise teachers of meetings on public health work which would be of interest to them. The health officer has also arranged for field trips for hygiene classes and at all times stood ready to give any information, advice, or assistance requested.

b. City Department of Utilities:

In the control of such factors which influence health as water, waste and sewage disposal, this department has made available annual reports; answered inquiries in this field; and permitted field trips supervised by its employees to observe the work in actual operation.

c. Police Department:

Has been particularly helpful in the field of safety through the work of officers with the school traffic patrols in the elementary grades and talks to classes. In the secondary level members of the traffic squad meet classes during units on motor vehicle accident prevention and give demonstrations.

d. Fire Department:

Encourage fire prevention in the elementary grades by talks to classes and encouraging poster displays for Fire Prevention Week. Demonstrations of fire extinguishers have been given to classes working on first aid units. Check lists for use in discussing home safety have also been furnished.

e. City Public Library:

The Library has frequently furnished sets of reading material to teachers who have requested the favor. These may be taken to individual schools for periods as long as one month to supplement school materials. Librarians will also arrange for material to be available at the City Library on any subject which is being studied. The City Library can render valuable service in working out the integration of hygiene with English by furnishing biographies of persons important in medical history or books on health subjects. Periodicals which carry health articles may be procured there. Many high school pupils do considerable study at the library for educational and social reasons and the opportunity cannot be overlooked.

2. *Voluntary Health Agencies:*

Those we have found valuable are the American Red Cross with material for use in first aid work and accident prevention. One difficulty which often exists with the Red Cross is red-tape and the other is expense. Pupils can be encouraged to qualify for the various Red

Cross certificates in first aid and life saving which seem to offer incentive for the mastery of desirable skills. Some schools find the Junior Red Cross can be developed into an activity which will contribute a great deal to the hygiene instructional program if properly coordinated. The county branch of the National Tuberculosis Association furnishes free or inexpensive material for classroom use in studying this disease which is so important in the high school and college age groups. The set of 28 Isotype charts it has developed has proved extremely valuable. A larger community might have other national agencies which would furnish assistance directly but we are forced to secure by mail material from such groups as the American Public Health Association, American Social Hygiene Association, American Society for the Control of Cancer, American Health Association, National Committee for Mental Hygiene, National Safety Council, National Society for the Prevention of Blindness, to mention a few.

Some commercial agencies, such as the local agents of the Metropolitan Life Insurance Company, have useful material and can furnish their pamphlets on numerous health problems; the local John Hancock Mutual Life Insurance Company agent with their first aid manual; other insurance agents with first aid, accident prevention, and fire prevention material; the local automobile association representative has excellent material published by the American Automobile Association.

Although this might be considered as projecting the community a slight distance beyond its natural boundaries, I wish to at least mention the wealth of assistance a teacher may secure from county, state, and national health agencies. The county health department will furnish the monthly and annual report and perhaps speakers and information. It must be relied on by rural schools to supplement instruction in a manner that the city health department does above. Both the county hospital and county tuberculosis sanitarium, if one exists, should offer opportunities of field trips and assistance from their staffs.

Our state government has several agencies which can be utilized by a health teacher. The California State Department of Public Health not only issues a series of pamphlets on health subjects but a Weekly Bulletin, available free to any teacher, and a biennial report, which is of doubtful value. Most helpful of its subdivisions are the Bureau of Child Hygiene, which will furnish free all of the material needed for a unit on prenatal, infant, child and maternal care; and the Bureau of Venereal Diseases which, through Mrs. Ann W. Haynes, the Public Information Editor, will furnish a wealth of reading materials, supply films, and give any information on its work requested. The Health and Safety Code published by the Supervisor of Documents in 1939 for two dollars should be available to teachers of any system.

Other state agencies which we have made use of are: the Department of Institutions, the Bureau of Vital Statistics, the Department of Agriculture, the Department of Motor Vehicles, and the California State Highway Patrol. Unfortunately, our State Department of Education seems to have missed the boat when it comes to hygiene instruction. One thing that would be most welcome to health instructors would be a monthly bulletin in the field that would enable them to keep abreast of the rapidly changing information in this field. The necessary organization to edit such a bulletin in a satisfactory and scientific manner could also serve as a full-time bureau of information to classroom teachers of health. With many schools expecting teachers of subjects other than health to do what little health teaching is done, I feel this need imperative.

In the field of national health agencies which offer valuable assistance, I have already mentioned a few of the voluntary agencies; the list is long and beyond the scope of this paper. An inquiry to the National Health Council will bear fruit. Of the subdivisions of our Federal Government which have information suitable for classroom use five need mention. They are the United States Public Health Service, whose weekly "Public Health Reports" should be available to all hygiene teachers; the Food and Drug Administration; the Federal Trade Commission; the Children's Bureau, the publications of which are procurable from the California State Department of Public Health; and the Veterans' Administration. Government publications may be followed from the Weekly List issued free by the Superintendent of Documents, who also has publication lists on various subjects, including health.

Perhaps the United States Public Health Service or some branch of the Social Security Administration can fulfill the need of classroom teachers for an up-to-date health bulletin.

3. *The Organized Medical Profession:*

The local medical society, whether it be city or county, can be consulted for information. It would appear that doctors could fulfill their obligations as citizens by aiding teachers of health in securing correct information and might even go so far as to discuss health problems with classes. We have been successful in securing pediatricians to speak on prenatal, infant, and child care but have not progressed beyond that.

Many physicians have as hobbies particular branches of their science and could contribute a great deal.

4. *Business Organizations:*

One must be constantly on guard when utilizing any private concern or individual to aid in classroom instruction that correct information for the pupils and not promotion of any product be the primary consideration. More and more, as we find school and life growing together will we find the community entering the classroom with education and not business as its goal. The fault that our citizens have not contributed more to actual classroom experience of their own children has probably lain with the hesitancy of educators to invite their participation.

Examples of helpful assistance we have used are: the provision of information and material upon accident, health, and hospitalization insurance to pupils by insurance concerns; permission to visit its laboratory and view techniques by the hospital; information on immunization from a commercial laboratory; materials and information from drug stores—for example one class desired to know exactly how much a diabetic spends for insulin a day; a reputable pharmacist furnished a correct reply; a grocery furnished (consciously or not) via a class member who worked there, a display of infant food; a department store provided a layette for the unit on infant care; a creamery allows classes to visit the plant to watch the pasteurization and care of milk with (last but not least) free ice cream for all.

5. *Private Citizens:*

How to get the citizens to school and become interested in education is a problem discussed wherever teachers or educators gather. What could be a better solution than to invite them to take part in teaching? However, dispensing with such an ulterior motive, I believe the opportunities for contribution to education by private individuals to be limitless and practically untouched at present. The use of such a teaching device must be properly prepared for and the information the visitor brings must be fitted into the unit of work by such preparation.

Some worthwhile possibilities for the use of private individuals which occur to me are: a discussion of the Pasteur treatment by a dog and cat doctor; improvement of personal appearance by a beautician during a unit on personality; demonstration of safe driving by auto dealer; description of proper food handling by a cannery or meat plant worker; building sound mental health by a psychiatrist.

We feel that the mothers who bring six month old infants for the school nurse to bathe before a high school class of thirty boys contributes greatly. Do not overlook the possibilities of individual class members contributing. The boy who took the Pasteur treatment gave far more to his classmates in describing it than could a state bulletin. First hand information came concerning the value of "cold-shots" from class members who had them the previous winter; also in a discussion of allergy how could a teacher improve on the teaching situation presented by the boy whose brother had thirty scratches made on his back and was allergic to all. Occasionally a good deal of misinformation can be disseminated for which the instructor must be on his guard.

6. *Field Trips:*

These are of value if correctly integrated with the class work. The pupils should be prepared in advance to appreciate the information derived from trips into the community. The more varied the possible experience a community can offer to pupils, the more field trips can be profitably taken. It should be remembered that a field trip is not just a bus ride but an educational opportunity. Some which we have used fruitfully are to the laboratory of the hospital; to the water supply system; to a milk plant; to the sewage disposal plant; to a nursery school; to the Veterans' Facility; to the Hall of Science of the Golden Gate International Exposition.

A few other opportunities which are presented in the community life for hygiene instruction but do not enter easily into the above classifications are:

a. First class motion pictures on health subjects, such as "Louis Pasteur," "Yellow Jack," and "Dr. Ehrlich's Magic Bullets," which pupils should be encouraged to attend.

b. Health material in the daily paper.

c. Contests on health subjects such as one on accident prevention sponsored by the Ford Motor Company and one on adequate training for the medical profession under the auspices of the American Medical Association. Both were on good subjects and could have been used for an integration between hygiene and English.

May I reiterate that whatever the type of school, the health instruction should attempt to increase the contributions which the surrounding community can offer to promote the health of its youth.

SOME THOUGHTS ON PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL

By an Elementary Physical Education Supervisor

"Every phase of a child's training is conditioned by his health," says Henry Otto in "Elementary School Organization and Administration." Of what value are all the integrated programs, all the progressive education, if the child is not growing in weight and height as a normal child should grow. The parent is concerned with the good health of his child first and foremost. Reading, writing and arithmetic come second. He is concerned more with the child's development socially than with the fact that he has a high I.Q. An unsocial child who cannot mix with his mates and join them in healthful, vigorous play activities is indeed an unhappy child.

The child's chief business is to grow—socially, physically, mentally, morally. To grow physically he must establish habits of rest, proper nutrition, cleanliness, play and exercise. To grow socially he must learn to live with others, observing their rights, entering into the enterprises of his mates cooperatively. Every day a growing child must play vigorously in order that he may develop organic vigor, good posture, agility.

In the artificial school environment he has to adapt himself to the numbers who share the almost always too inadequate play space, equipment, and supplies such as balls, etc. A play period at recess or noon might be "an explosion of excited humanity," a rough and tumble affair which gives unequal opportunity for participation by the many in big muscle activities. It might be a dead affair where children stand idly and quietly about with no relief for childish bodies in running and throwing and leaping, or it will be regulated, guided, controlled for equitable distribution of play facilities and choice of wholesome, interesting activities, all dependent upon the adult leadership.

If all children are given the chance to play there must be periods of instruction in many activities so that they can enter into a variety of games with skill and consequent satisfaction. Without instruction it is impossible to carry on a constructive play period. A destructive play period defeats one of the chief purposes of education—namely, good citizenship.

Not all of the games taught carry over into the leisure time of the child. Certain games will be played only with an umpire or when there are large numbers to participate. These games are those generally played on the school yard and provide a part of the daily big-muscle activity so needed by the growing child—namely, about one hundred minutes. The other hour or more must be at home. At home the child must rely upon the children of the immediate neighborhood for companionship. The group will vary greatly in age, ability to play, and sex. The child who is socially fit, who is a good sport, will be a welcome addition to the group, providing he can hold his own in the various skills necessary to participate in the activities of the others. Ability to leap, run, jump, climb, dodge, throw, catch, strike, and so on, will fit the social child to take his place as a valued member of the team club, or whatever the organization may be. It is not then so necessary that the child be taught specific games to be played in leisure hours but that he be taught skills, and that he learn to be a good citizen at all times, observing the laws of good sportsmanship.

The program of rhythmic activities provides another phase of vigorous physical activity. Rhythmical activities are conducive to good posture, develop coordination, grace, and ease of movement. They are essentially social, a joyous expression of a mood. In such activities are inculcated habits of courtesy, friendliness, graciousness, good-fellowship and wholesome fun.

MENTAL HEALTH IN RESTRICTED AND CORRECTIVE ACTIVITIES

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Man's conflicts have their origin in the social order. In frontier life, the culture which includes all aspects of our lives was stable or changing very slowly. Resources were abundant; capital was scarce; hard work was honored; youth had a significant place; life followed a definite pattern. Industrialism brought a change in American culture. Human problems were created as a result of mechanization, transportation, and urbanization. Individuals were unable to adjust to the changes caused by the increasing rapidity of scientific inventions. Maladjustment, tension, conflict, strain, and a break down in value patterns were the result. The mental mechanisms of compromise and rationalization have become dominant patterns in our culture because of this social lag. The role of education during

this period of transition is to help students develop an understanding of the processes causing change and to develop individual competence so students can participate in the present culture and move it in the direction of desired values.

There is a change in education today from the old emphasis on specific skills to attention to the individual as a whole. The well-rounded development of the individual and his adjustment to the society of which he is a part are now recognized as the desired goal. The changed emphasis in education as well as in physical education is in part the result of studies which show an increased number of behavior difficulties, increased evidences of unhappiness, frustration, delinquency, and the inadequacy of young people to make friends or even to feel at ease in a social group.

For convenience of analysis we refer to the physical, mental anl social qualities of the individual. These parts cannot be separated; they are closely integrated and are dependent on each other. A change in one means an adjustment must be made in the others before a state of equilibrium can be reached. Each aspect must be investigated and studied. This discussion will attempt to analyze ways in which the corrective physical education program can contribute to the development of sound mental health.

What is mental hygiene? "For practical purposes one may conclude that mental hygiene is a way of life that shall enable us to attain the optimum of mental health or personality development. This may be considered from the standpoint of the individual in his striving to get along happily and effectively in his work or with his family; or from the general standpoint of the study and prevention of the various forms of mental maladjustment. The aim in either case—mental health—may be defined as the adjustment of individuals to themselves and the world at large with a maximum of effectiveness, satisfaction, cheerfulness, and socially considerate behavior, and the ability to face and accept the realities." This positive aim of mental hygiene was prepared for the White House Conference on Child Health and Protection in 1932.

Six factors contribute to the promotion and maintenance of mental health—heredity, personality, the emotions, intelligence, physical growth and development, and social relationships. The first foundations of mental health are laid down at the time of fertilization of the ovum. Each individual is born with certain potentialities for mental health or mental illness. The early experiences of the child are important factors in the unfolding of these potentialities so that the child may reach his optimum development. Most children will develop satisfactorily if given a wholesome environment. A great part of mental illness could be prevented by careful physical and mental training in childhood.

"One of the first essentials in mental health is sound physical health." Violations of the laws of health contribute to worry, inefficiency and ill health. On our field of corrective physical education we have emphasized physical health. We must continue to stress the importance of the physiological needs of the organism but must broaden the scope of our program to include the mental and social health needs of our students. Our society has thought that meeting the physical needs of an individual was sufficient to make him satisfied and happy. This is rarely true. Other needs than the material realities must be satisfied. We can discover these intangible desires through the expression of attitudes and value concepts of the individual.

Remedial and corrective programs have often failed or been limited in value because they have worked with symptoms rather than with the fundamental causes of deviations. We have treated poor body mechanics with little attempt to correct the conditions which were the cause. Our emphasis in remedial instruction in physical education must be directed to a change in the whole child. We must be increasingly concerned with each child's interests, needs, and capacities, his attitudes, emotional reactions, and value patterns. We must see the totality of each individual rather than view the individual as a neuro-muscular skilled machine. This means more kinds of teaching than education for skills, for health, or for posture correction. We must be concerned with the social conduct and personality development of our students.

Preventive and corrective work applies to every pupil in the physical education department. Every physical education teacher must know the fundamental principles of health and corrective physical education. These principles must then be put into practice, otherwise the knowledge is useless. Let me stress the importance of this. We give instruction but do little to see that the information is put into practice in out-of-class situations. We should watch the student's behavior rather than listen to his statements. Behavior and attitudes are indices of relative personality adjustment. Every activity must be taught according to the laws of correct body mechanics. Statistics show that this is not always done, for example, many foot injuries are caused in certain sports. Physical and mental conditioning should precede participation in activity.

On account of the nature of special corrective physical classes and the smaller number of students in them, we have a valuable opportunity to work with each individual as a total functioning organism. Personality development must be one of our main objectives. The factors of mental hygiene

are a responsibility for everyone of us. We must develop skill and understanding in observing children's behavior in order to try to learn the underlying motives for it. We as teachers must understand the interplay of the physical, psychological, and social reactions of each of our students.

Let us take an inventory of ourselves! Are we able to make this analysis? Are we well-adjusted? Are we cross, irritable, fatigued, worried? The teacher's health and personality are in part responsible for the adjustments that the children make. Ability to cope with the child's problems is dependent on our own adjustment. We must provide some recreation for ourselves, find outlets in the creative arts, make friends with people in other professions. Our food and rest habits, our level of feeling and emotional reactions are important to our own mental health as well as to the mental health of the students.

The teacher's personality and adjustment greatly affect the atmosphere or the "emotional climate" of the classroom. There has been a shift in emphasis from the individual as a total unit to the individual *in* his environment. This environment consists of the human relationships as well as the material things. We can make a contribution to the child's growth by making our classes democratic, by decreasing authoritarianism. Kurt Lewin, University of Iowa, has demonstrated that in the democratic type of classroom, there is much less tension. The same amount of learning is accomplished in each, but in one without costly and harmful strain. Let us be wise and endeavor to create an atmosphere of encouragement, cooperation and security, with freedom from tension and emotional stress.

Today we know that posture consists of more than bones, nerves, and muscles. In addition to these it depends on emotional adjustment, endocrine balance, an intelligent attitude, and a desire for good body mechanics. Though many schools have broadened the scope of the corrective program, others are still proceeding along the narrow path of exercises for posture and foot deviations. We must be extremely careful of conditions we try to correct, for some disorders need medical attention instead of corrective work. I am going to confine this discussion to the newer components of corrective physical education classes, for these seem to me to be the most essential to personality development.

One of our first responsibilities is the development of favorable attitudes. Many college students have an attitude of dislike for corrective classes because of their experience in high school. The classes in high school are compulsory; students must enroll in them even though they feel a definite dislike. This method develops unfavorable attitudes and creates conflicts in the individual. We must face the fact that sometimes more damage is done psychologically by corrective work than is accomplished physically and physiologically. If the student has a strong attitude of dislike, I believe it far wiser for the mental health and adjustment of that student to postpone his corrective work until some later time. However, I thoroughly believe in wise discipline. Some times a student must be compelled, against his will. By means of certain technics and pressures we can help to formulate a new attitude. It can be pointed out that correction is a means of making it possible to participate more successfully in other activities. Begin by arousing interest. Work to get students interested, argue them into wanting to do something about themselves. I have seen high school and college students refuse to leave corrective classes. These students felt that the classes still had something to offer them. This is an example of what a correct attitude and an atmosphere of patience and sincerity can do to build up the prestige of corrective classes. With sufficient insight we can assist the child to gain through the activity what will be most valuable for that individual at the particular stage of his development.

In addition to general attitudes, there are specific or individual attitudes to be modified or changed. The adolescent wants to conform to group opinion, for otherwise he loses status in the group. Many of the students in our special classes are not the individuals who love sport and activity. We often see the child who has some handicap which has physical and emotional implications, and the child with physical symptoms whose primary trouble is either mental or emotional. The aggressive child selects sport as an activity, whereas the shy child with withdrawal tendencies enters individual program classes. Children with handicaps, the short and tall, the fat and thin, those of slow or too rapid physical or mental growth, all develop emotional difficulties that must be overcome. There is individual variation in the ability to compensate or to tolerate physical, emotional, and mental handicaps. The development of a wholesome personality is difficult when playmates tease or make fun of the handicapped. Frustration and conflict mean delay in our remedial program. To endure frustration is to teach the child to keep a firm upper lip. We must be aware of individual differences in the amount of time these different individuals can spend on a task, as the result of their past experience, their interests, their inequalities in physical and mental ability. For these individuals, a little praise, given sincerely, is of inestimable value in developing confidence in their social relations.

One of the basic physiological needs of the organism is the rhythm of activity and rest. This is being neglected. More attention must be given to every boy and girl's learning a leisure time activity

sufficiently well to be enjoyed. An important part of the corrective program for building mental health is to provide some opportunity for participation in games and sports in combination with the exercise program. The emotional values of participation in play should never be denied any child. Everyone wants to have some fun. Almost every child is able to take part in some game, which for him may be a form of rest and a means of releasing the tensions of the classroom. By this means the child's attention is directed away from his handicap; the emphasis is placed on the pleasure of participation.

Corrective dance and corrective swimming are being used to provide the students with recreational activities adapted to their capacities and abilities, at the same time giving them some remedial and preventive help. Other games and activities can also be used although most of them cannot be adapted as effectively to correction of specific deviations. The students are learning skills that others are doing which helps them to participate and become members of the social group; rather than as is often the case, allowing the student to feel different from others. Creative dancers from these classes have been included in the student dance program.

Competition and speed in our society have resulted in a great amount of fatigue and insufficient rest. Few of us or our students take the time to meditate and shut out the intricacies of life. An important addition to our corrective classes has been the teaching of the technics of conscious relaxation. Some psychiatrists, psychologists, and medical men are devoting time and study to this problem in their patients. They are discovering that conflicts and worry are lessened by relaxation. If these doctors are discovering values in relaxation for the neurotic and maladjusted individual we should certainly assist our pupils to learn these technics as a preventive measure. Habits of rest and of conscious relaxation play a large part in the development of a wholesome temperament.

Nutritional problems are also related to normal mental, emotional, and physical development. Many girls go hungry for the sake of their figures. The malnourished are more prone to disease and misbehavior. We can do a great deal for these students in building sound values and attitudes in addition to working directly on their diet, activity and rest. Cooperation with other departments in school should lead to the total development of these students. In our work, we have provided classes for weight control—for reducing and for gaining weight. Along with activity in these classes we make an analysis of the causes of the condition. If the over or under weight is caused by other factors than just over or under eating, it is our responsibility to see that the child receives medical care.

I have been appalled at the lack of muscle tone in our high school and college girls. Is this a result of our changed living conditions, lack of proper food, or fatigue? Is it our responsibility to do something about this lack or, in this modern age, are we just as efficient with less muscle tone? Individuals cannot even sit, stand, or walk efficiently. Movement is the fundamental element in human life. The eye is quickly attracted to a person who moves gracefully and smoothly. Walking seems to be a lost art. Sitting and rising from a chair is such an effort for most people; the arms and shoulder muscle are used instead of the muscles of the thighs and trunk. Freedom from unecessary muscular tensions in standing positions helps the individual in his social relationships. In our corrective classes, we can teach our students poise and control in sitting, standing, and walking efficiently.

Adjustment to the social environment is the individual's most crucial test of mental health. Our corrective and remedial classes can do much more than they have done to assist the student in building and maintaining sound mental health. Mental hygiene values can be accomplished through experience in an enriched curriculum, which will meet the basic human needs; by a classroom atmosphere free from tension and hurry; by the aid of a sympathetic instructor interested in the development of each student; and in the promotion of human relationships. Pupil progress is now being evaluated in in terms of personality development rather than in an increase in specific knowledges and skills. A person in sound mental health is a well-adjusted personality.

PUBLICIZING THE WORK OF THE PHYSICAL EDUCATION DEPARTMENT

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There is a very definite need today to present to the parents and tax-payers a better picture of the place that physical education is taking in our schools. Few of the parents of today's students had any of the many advantages physical education offers today in the physical education departments of our schools. Any experience they may have had with physical education is usually associated with routine exercises in which they had no interest. Or it may have been that their instructor turned the students loose, so that they could do as they pleased, and nothing definite was accomplished. This was thought of as a "workout," and it has given the public entirely the wrong concept of the aims and objectives of physical education.

The people who pay the bills and the parents whose children are affected—for good or ill—by the physical education program in our schools have the right to know what their money buys and what happens to their children during school hours. During times of economic stress many demand to know. In most instances it is left to the teaching staff or the administrators to enlighten the public.

It therefore becomes the responsibility of the physical education teacher to publicize the work of his department. His method of procedure depends on his own resourcefulness and the desires of the community. Some communities demand demonstrations. Others may want to know results without the stress and strain of a show.

The physical educator must be able to answer the question: "What proof have you that the students are healthier, or more courteous, cooperative, and charitable?" We know they may be healthier for engaging in play, but many thinking people are asking teachers or their neighbors, "How do we know? What proof do we have?"

The problem is to determine what methods might be used to adequately publicize the beneficial results which are being accomplished by correct physical education activities in the schools. By so doing, the taxpayers will feel that their money is being spent for something worth while, and the parents will realize that their children are receiving training which is of great benefit to them.

This is the immediate problem, but while trying to solve it other ways in which this publicity will help the school should be kept in mind.

Douglas has summed up the purposes of approved school publicity as follows:

"1. To give to the public the information to which it is entitled about its schools.

2. To prevent the spread of misunderstanding and false apprehensions.

3. To limit the malicious misrepresentations about the schools by disgruntled or pernicious individuals.

4. To pave the way in the home for the support of new policies, organizations, developments, and methods.

5. To obtain financial support for the schools.

6. To increase school attendance.

7. To protect the teaching and administrative staff of the school from unfair criticism and misjudgment." [1]

Articles in local newspapers, school papers, pictures, and talks to groups will inform the public of the aims of the physical education department. The activities and the desired values for each student can be described; large numbers of students participating in any activity make a favorable impression on the people who are inclined to criticize the schools. Health material and the desirable habits taught make good reading. Moving pictures, posters, pageants, play days, field days, posture drives, health drives, mass athletic drills, class exhibitions, parents week, etc., are all important. They all have a place in the process of informing the public and help to sell the physical education department. Physical education can make a strong contribution to the health program. Thus the question, "Whether the health of the student is really improved," may be raised. Parents and taxpayers deserve to be given an intelligent answer to this question.

"The health of the child is improved if the child continues to show better posture at home as well as in school; if he uses his leisure time in play more often, and in rushing less often to the movies after school and Saturdays; if he practices safety rules; if he practices good sportsmanship; if he shows better school attendance and academic record. These are what the public want to know, and such results are being accomplished by many physical educators who should continue using all possible means of informing the community of their aims and methods. But these are the popular goals. The real goal is first of all the individual child, who has physical weaknesses to be corrected. This is a more difficult task but in the end doing this job well will prove the purpose of the physical education department better to the public than

[1] Douglas, H. R., "Organization and Administration of Secondary Schools." Ginn & Co. 1932—page 512.

any number of demonstrations or general reports." [2]

These individual cases of improvement could be publicized through the newspapers, parent-teacher, or other groups. In most instances, it is advisable to omit the name of the student. Any parent-teacher group should be anxious to help by giving the answer to the question, "Are our children healthier?" That is one way in which they could "interpret the schools to the community."

For years sociologists, economists, recreational leaders, and progressive educators have spoken of the ideal of the "lighted school house"; the school house illuminated and used at night by everyone in the community as the community capitol, the one building in the neighborhood that is paid for and maintained by everyone. It should be obvious that it is a waste of taxpayers' money to build a school plant which is used for five days a week from eight to three o'clock and then build a recreation building which is used from three to ten or eleven o'clock. Why can't these be combined? Save the money used for buildings, and put it into leadership? [3]

The "lighted school house" ideal is along the line of the old New England Town Meeting. That fulfilled a distinct mission, and it could very easily be used as the basis for enlightening the public along physical education lines. By presenting evening activities for the community, or a complete summer program of baseball league, tennis tournaments, and special programs, this ideal could be fulfilled and the community be given an entirely different conception of the aims of physical education.

It is not difficult to interest and enlighten the public when there is something definite to present, particularly when it relates to health. Health is the logical and essential responsibility of our health and physical education program. It yields respect for the work, friendship for the school, and increased teaching efficiency, as well as more activity and happiness for the pupils.

"The growth of a profession in the last analysis rests upon service. The most effective way to promote any undertaking, a restaurant, a garage, a theater, a playground, or a department of physical education is by the expressions passed on by word of mouth, 'It was good.' 'He is a good mechanic.' 'The children are safe at the playground.' The final vote will be cast by the parents. If not in this generation, then by the parents of the next who are the boys and girls now in school. 'That was the best part of my high school training' means a sympathetic attitude on the part of the parents, and it makes public sentiment for the providing of equipment and staff to make our modern cities a fit place in which children and adults may live."[4] It is also, in the final analysis, the most effective way to publicize the work of the physical education department.

[2] "Presenting Physical Education Programs to Communities," Orren B. McKnight, *Education*, April, 1940.

[3] "Recreation Looks at Physical Education," Mabel Madden, *Journal of Health & Physical Education*, June, 1938.

[4] Nash, Jay B.—*The Administration of Physical Education*. A. S. Barnes & Co.

CAMPING AND THE PUBLIC SCHOOL

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That teacher is yet in the "forest primeval, throwing seeds to the white blackbirds" [1] who has never told himself, "if I had these children where I could get at them twenty-four hours a day, then I am sure I could show real results." If this be true then surely the camp provides a place where educational opportunities abound. If education is concerned with teaching children to do better the worthwhile things that they are going to do in life, camp provides a fine environment for this process.

Charles W. Elliott, when president of Harvard University, said: "The organized summer camp is the most significant contribution to education that America has given the world."[2] John Dewey, the veteran philosopher and educator, emphasized the need for more camps a few years ago when he remarked: "The average American child seldom comes in direct contact with nature. He is in danger of losing contact with primitive realities, with fields and rivers, and with the problem of getting shelter, and of obtaining food, realities that have always conditioned human life—and still do so."[3]

[1] Bierce, Ambrose, "Write It Right." Walter Neale Pub. Co., New York, 1909, p. 73.

[2] National Park Service in the Field of Organized Camping compiled for the 1937 Year Book—Park and Recreational Progress — mimeographed — *not copyrighted*, p. 6.

[3] *Ibid.*

Credit for organizing the first camp for boys in America is generally given to Ernst Balch. Balch established his camp in 1881. Seven years later Dr. and Mrs. Luther H. Gulick created a camp for girls. The past forty years has seen a rapid rise in the number of camps of all types. To-day camps map be classified under three heads: 1) private camps conducted for profit; 2) private organizations conducting camps upon a non-profit basis; 3) public organizations and state and federal governments providing opportunities for camping on a non-profit basis.

In 1936 the National Park Service sponsored the first national conference on the planning of organized camps and planning areas with the object of making possible organized camping on a different basis than had been practiced before that time. Recreational demonstration areas were established primarily to provide organized camping facilities near large population centers. More than sixty camps were subsequently constructed in twenty-four states. These were made available to accredited public, semi-public or private non-profit organizations which were able to provide competent leadership and a well planned, appropriate program of camping activities. Camps thus provided were intelligently planned and superbly equipped. This move on the part of the federal government revealed its cognizance of the desires and needs of the American public.

Organizations such as the Boy Scouts of America, Girl Scouts of America, Y. M. C. A., Y. W. C. A., 4H Clubs, Camp Fire Girls, and others too numerous to mention, have long maintained excellent camps. Such camps have offered abundant advantages to their campers. Leadership and facilities in these camps have frequently been superior to those of the most costly private camping enterprises.

Philosophy related to camping has not been static. During the years in which the movement developed three phases have appeared, each in turn to be absorbed into an ever broadening method for reaching the goal. At the start camping was a recreational movement, designed to insure the camper a happy vacation, healthful, safe, and entertaining. As time went on a second phase was developed in which emphasis was placed on the acquisition of skills in athletics, sports, camp crafts, hobbies, and the arts and sciences related and sometimes unrelated to camping. Education had appeared in camping. Directors of camps exerted every effort to secure the services of those best qualified to teach the desired skills. Competition became keen within camps and between camps to excel in accomplishment and establish records. Awards of all kinds were offered to stimulate the competitors to greater effort. Recreation had become a means rather than an end to be striven for. The camp program had become considerably broadened in scope.

With a camp program dominated by sharp competition for the acquisition of a large variety of skills, competent camp leaders soon observed that campers, while learning in the desirable environment of camp, might be studied in a way seldom provided in the school situation. From this observation emerged another phase of camping. The teaching of skills continued, but the process soon became more important than the end achieved when it became evident that the process provided excellent raw data for personality study and child guidance. Progressive camp men soon adopted scientific educational methods for studying the child with the guidance motif dominant. Parents and educators approved the new emphasis. Camp personnel was even more carefully selected; the skills man became second in importance to the guidance man in camp organization.

The camping movement has won complete educational recognition. The phase it is now entering is one in which it retains in modified form all the services rendered the child in the past, and because of its value in contributing to the development of the "whole child" it will gradually be considered an integral part of the educational plan for youth; complementary rather than supplementary.

An eight weeks camp uses 1,344 hours of the camper's time. In a ten months' school year the public school child is in attendance some 1,200 hours. The physical welfare of the school child is of utmost concern to all those enlisted to insure it: nurse, doctor, parent, teacher and administrator. The school personnel is immeasurably handicapped in dispatching this all-important function by the ever present lack of time. The eight weeks' camp with both nurse and doctor in constant attendance, with daily time allotted for the use of their services, may do more for the child in one summer than the school can do over a period of years. It is conservative to estimate that one-fourth of the camper's fourteen-hour day will be spent in vigorous, well directed physical activity when he is a member of a well directed camp. This exceeds the actual *physical activity time* provided by many public schools over a four-year period! Many schools provide no more than fifty-two hours of directed physical activity in a year, or slightly more than two hundred hours in four years' time. This is *overall* time. Dressing, showering, roll call, and the like all diminish the activity time. The camp of eight weeks' duration can assure in excess of two hundred hours of activity.

The camp is admirably suited to deal with human welfare problems that all but stump the public school. Eating habits, table manners, enuresis, letter writing, sleeping habits, sex disturbances,

temper tantrums, represent a scant, haphazard selection from a long list that the modern camp recognizes and deals with surprisingly well.

In the camp the child is on hand twenty-four hours a day. In the school situation he is "elsewhere" eighteen hours a day. The camp, intelligently directed and properly organized presents a controlled situation; the public school, just as intelligently directed and just as well organized, presents by comparison an uncontrolled situation. Traditionally the school is looked upon by the child as a place of restriction, where assignments must be done if further restrictions are to be avoided. Camp, on the other hand, is viewed by the child as the veritable quintessence of all that is desired and desirable. To him camp is the place where restrictions reach their lowest ebb, where assignments are done because the need for their doing is obvious; because their accomplishment is more often than not followed by yet more interesting assignments, frequently self-imposed.

How does all this add up in the educational scheme? To this: pre-school eagerness to learn, revealed by the myriad question stage starting with the first acquisition of language may continue undiminished for a time. Gradually the bright light flickers and burns low in the humdrum atmosphere imposed by school routine and its unavoidable handicaps. Camp opens the door that admits figuratively and literally the oxygen that revives that eagerness to learn, without which the educational process is indeed a sordid affair.

Enlarging upon the assertion that camp presents a controlled educational situation as contrasted with the uncontrolled situation dealt with by the public school, it is time to consider the implied advantages and disadvantages of the two.

First, consider the uncontrolled situation dealt with of necessity by the public school. After eighteen hours absence the child returns to his desk. What has happened in those eighteen hours preceding his return is largely a matter of conjecture for the teacher. Proper, or improper consummation of the child's hygienic requirements, his emotional experiences, and his resulting personal vicissitudes as interpreted in the light of the new day are a blank page to the teacher, be he ever so fine a seer. Nor, when the child is one of at least thirty, will his brief report, or the teacher's cursory inquiry shed much practical light on the matter. The child is there to endure until the liberty bell rings in mid-afternoon and he can resume again the problems that really matter; the things that were left undone by the interruption of the school day. To say that those eighteen hours and their burden of influence for good or bad are really unimportant, places one in company with the hunter of white blackbirds!

Now consider the controlled situation dealt with by the intelligently directed and well organized camp. The camper arises with his comrades and his teachers (counsellors), follows the style set by those about him in the performance of hygienic requirements, and is ready and eager for the day ahead. His experiences of the preceding hours, and days, and even months and years, are well known by those in charge of his welfare. His physical and emotional status are both a matter of careful record and his care and treatment, his privileges and restrictions, are predicated on them and he knows it. He is not seeking escape. Important problems at hand are taken in stride, in company with others, in an environment in which there is no eighteen hour break, no confusing adulteration of influence. Here at last the teacher can execute the "follow up," that all-important function so often neglected because of the eternal handicap imposed by the public school: "not enough time."

Camping represents the oldest of all ways of living. The time man has lived in the artificial environment demanded by society to-day is extremely short in comparison with the history of the race. Man camped for countless centuries. Deep rooted are the effects of that prolonged racial weathering. The desire to return to the open is almost universal among youth and adults too, and is mute evidence of a primitive heritage.

Americans have a double heritage stimulating them to return to a semblance of primitive life: that earlier one common to all mankind, and that much more recent one stemming from the life necessary during the development of this country. Folklore has glorified it and few are the Americans who do not wish to experience it.

In camp then, the child soon feels that he is in an environment where he has long felt he should be. At ease and confident, eager and happy, the stage is set for learning as it can seldom be set in the public school. A well prepared camp personnel is in a far better position to show results than an equally well prepared public school personnel.

The future will reveal what use educators will make of camping as a complement to the present procedure. Here and there in the country enthusiastic administrators of public school systems have sponsored camping. Notably in California school-operated camps have been functioning for several years in some communities. The Board of Education of New York City has studied the problem of providing the children of that city with more camping opportunities. Colleges, universities, and normal schools here and there in the nation have instituted courses designed to train students for camp teaching (counselling) work.

It is probable that the assimilation of camping by public school systems at large will be gradual.

Week-end camping trips, led by school faculty members will be the opening wedge for longer, more intensive summer vacation camps, under the direction of those school people who see the writing on the wall and accordingly prepare themselves for a more gratifying teaching experience than the formal school has ever offered.

The human conservationist, that is the physical educator, occupies a unique position to be of service in camp work. Frequently he has had training or experience in the field. Usually he is in full sympathy with the goals sought. No doubt he will be first on the list of those faculty members called upon to lead the pioneer camping group from his school. Perhaps he has already been called!

A PHYSICAL FITNESS PROJECT

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According to Kilpatrick a project is a "purposeful activity wholeheartedly carried to completion in its natural setting". He further stipulates that a true project involves purposing, planning, executing, and judging. By definition and by criteria the Indiana Physical Fitness Program for men merits the term "project".

Purposing

In the first place the program had its inception at the National Conference of College and University Presidents on Higher Education and the War. Our president, Herman B Wells, was at this Baltimore meeting in January of 1942. His determination and conviction obtained there met with the unanimous approval of the Faculty and Board of Trustees and as a part of the War Service Plan physical education was required of every undergraduate man, unless excused by the Health Service Department, the Dean of Men, or the Men's Physical Education Department. On January 16, 1942, the program was approved and previously organized committees set to the task of creating a physical fitness program where none had existed before.

When the Faculty and Board of Trustees at Indiana University charged the men's department of physical education with the new physical fitness program, physical fitness was their primary objective. To this end one hour a day five days a week were devoted.

Normally the objectives of the department could be epitomized as follows:

1. Physical and organic growth and development.
2. Development of social traits and qualities.
3. Development of psychological or interpretive powers.
4. Development of recreational capacity.
5. Development of safety capacity.

Due to the national and local pressures, primary emphases have been placed upon motor fitness curricularly as well as in the program of measurement. Other desirable outcomes have been striven for but less directly and are not evidenced in the following statistical data. Educational emphases change but ideals and principles remain somewhat constant.

Planning

The program was divided into two primary phases: (1) the developmental phase, three days a week and, (2) the recreational phase, two days a week. The developmental program emphasized body building and conditioning drills and exercises, self-testing activities, combative activities, running and hiking, and recreational games and relays. The recreational program consisted of one day a week of seasonal team and recreational games and one day in which for half of the semester swimming was taken and the remaining half of the semester wrestling was taken.

Executing

To accommodate a total student population in a five day a week program, in a situation not previously planned for such a load, locker facilities, showers, and equipment had to be rearranged and reconditioned. Instructors and supervisors had to be provided and a system of records and reports had to be devised and set up. These were accomplished by the heroic cooperative efforts of the entire physical education department, the wholehearted support of the university administration, and the buildings and grounds staff. The protection of student health was made possible by the intense and capable efforts of a medical staff which had not previously had this responsibility in such a degree.

Judging

It is to the judgment or critical evaluation of the program and its results that this article is essentially pointed. Previous to setting up the measurements program described below a survey was made of existing factor analysis studies. From them it was disclosed that the essential factors in successful performance in physical education activities are

strength, velocity, motor fitness (ability), dead weight, height, and endurance in approximately the order listed. The items analyzed below were chosen in light of these facts and the program content has been chosen and modified with these facts in view as well as the general objectives stated above.

Administrative Grouping of the Test Items for Instructional Purposes. Five days were required in the application of the thirteen measures involved in

TABLE I. STATISTICAL ANALYSIS AND RELIABILITIES
Initial Test Battery

Test	Group	Mar 10	April 23	*June 10	August 10	Fact	Comparisons Between Test Periods				Norms
							Mar-Apr	Mar-June	Mar-Aug	June-Aug	
Brace	Total	M=14.63±.096 σ =3.06 N=1008	16.24±.131 3.00 527	15.99±.10 2.92 810	17.31±.08 2.10 626	diff. % C.R.	1.61 11 9.88†	1.36 9 9.64	2.68 18 27.07	1.32 8 10.15	15.
	Adv.			M16.43±.17 σ =3.47 N=424	17.45±.09 1.67 311	diff. % C.R.		1.80 12 9.28	2.82 19 21.69	1.02 6 5.37	
Burpee	Total	M=5.32±.04 σ =1.36 N=1007	5.96±.05 1.18 5.23	6.27±.04 1.03 800	7.21±.04 1.03 633	diff. % C.R.	.64 12 9.55	.95 18 16.96	1.89 36 32.03	.94 15 11.70	7.
	Adv.			M=6.46±.05 σ =1.00 N=420	7.24±.04 σ =.80 318	diff. % C.R.		1.14 21 17.53	1.92 36 30.96	.78 12 13.70	
Gen. Motor Quot.	Total	M=97.30±.28 σ =7.52 N=701	102.52±.37 8.00 460	100.3±.47 10.27 515	105.30±.30 6.96 543	diff. % C.R.	5.22 5 10.63	3.00 3 5.48	8.00 8 19.51	5.00 5 9.09	100.
	Adv.			M=102.5±.78 σ =12.81 N=271	105.51±.42 σ =6.96 270	diff. % C.R.		5.20 5 6.27	8.21 8 16.29	3.01 3 3.46	
Chins (Pull-ups)	Total	M=7.02±.11 σ =3.24 N=896	7.80±.14 3.28 573	7.15±.12 3.18 694	8.36±.14 3.47 615	diff. % C.R.	.78 11 4.48	.13 2 .81	1.34 19 7.61	1.21 17 6.50	9.
	Adv.			M=7.85±.17 σ =3.24 N=360	8.82±.18 3.42 313	diff. % C.R.		.83 12 4.11	1.80 26 8.14	.97 12 3.77	
Push ups (Floor)	Total	M=16.88±.21 σ =6.66 N=1008	18.45±.31 7.12 537	16.03±.23 6.66 808	20.75±.29 7.24 605	diff. % C.R.	1.57 9 4.22	-.85 -5 -2.71	3.85 23 10.87	4.72 29 12.75	23.
	Adv.			M=17.20±.32 σ =6.70 N=424	21.53±.43 7.32 291	diff. % C.R.		.32 2 .83	4.65 27 9.73	4.33 25 8.17	
Stdg. Brd. Jp.	Total	M=83.60±.27 σ =8.16 N=896	84.65±.35 7.92 523	86.47±.31 8.13 708	88.96±.29 6.90 558	diff. % C.R.	1.05 1 2.39	2.87 3 7.00	5.36 6 14.11	2.49 3 6.07	90.
	Adv.			M87.83±.40 σ =7.65 N=367	90.47±.41 7.04 299	diff. % C.R.		4.23 5 8.76	6.87 8 14.31	2.64 3 4.71	
Vert. Jp.	Total	M=18.82±.08 σ =2.29 N=806	21.24±.12 2.82 583	20.81±.11 2.94 710	21.45±.11 2.85 618	diff. % C.R.	2.42 13 17.04	1.99 11 14.63	2.63 14 18.79	.64 3 4.03	19.25
	Adv.			M21.20±.15 σ =2.85 N=367	21.70±.18 3.06 302	diff. % C.R.		2.38 13 14.08	2.88 15 14.92	.50 2 2.17	

* June 10 totals include Freshmen and Sophomores for 1st time.
† Critical ratios not corrected for similarity of group constituents.

this report. The criteria for the inclusion of a test item were:

1. Validity to the objectives of the program.
2. Educational worth of the test as an activity.
3. Ease of administration.
4. Absence of expense in time or equipment.
5. Norms available if possible.
6. Utility of item in computation of combined measures.

All items were considered to be valid and educationally desirable and to meet most of the other criteria reasonably well. Items were organized together so as to get variety and to assure their accomplishment in the allotted time.

1st day: Brace, Burpee, Push-ups, Age, Height, Weight.

2nd day: Standing Broad Jump, Chins, Vertical Jump, Dips.

3rd day: "Test of a Man" and 60-yard dash.

4th day: Two Mile Walk.

5th day: Regular class ending with Quarter Mile run.

Additional tests were computed from these items. These included General Motor Quotient, Larson's Strength Test, and the Drop-Off.

Description of Items and Procedures. This is the second achievement report. Since the first study was published new items have been included. The original items will be discussed first, followed by a description of the added measures.

Brace Test. The Iowa revision of Brace's test of motor ability consists of five matched pairs of stunts measured on the pass-or-fail basis. A possible score of 20 points can be earned by assigning two points for success on the initial effort, one point upon the second trial, and zero if the second trial is unsuccessful. The test is pupil-partner scored. Pencil, paper, and watch are the only equipment needed.

Burpee Test. From a stand one squats on the floor, from there he executes a front support. He returns to the squat and finally to a stand. This four part movement is repeated as many times as possible for ten seconds giving one point for each complete exercise and ¼ for each part of the last exercise accomplished. No equipment is needed save pencils, paper, and watch.

General Motor Quotient. McCloy's General Motor Capacity Test includes: 1. Classification Index I; 2. the Sargent Jump (vertical jump); 3. Burpee Test, and 4. Brace Test (Iowa revision). These items are weighted from tables in the author's book and their sum divided by the norm in G.M.C. for the person's Classification Index. This fraction times one hundred is the General Motor Quotient. Jump boards suspended from basketball backstops have been found to be more effective than to jump against the wall. This event is squad-leader scored.

Chins. The pull-ups were done from the high-bar with choice of grip allowed. A stout pole supported in the corner of a room would serve for the high bar. This event was squad-leader scored.

Push-ups. The floor dips were pupil-partner scored. The chest was required to touch the floor each time.

Standing Broad Jump. This event was done indoors on mats marked in 6-inch intervals. Squad leaders estimated to the *nearest three inches* and recorded.

Vertical Jump. The jump-and-reach or Sargent Jump was measured on 6-foot plywood boards painted black. Magnesium chalk is needed for the fingers. It has been found that a yard stick is quicker than and practically as accurate as more complicated means of appraising the distance jumped.

Table I provides the statistical analysis of the items for which the results of four testing periods are available. Mean performances are indicated for each of the seven items and the reliabilities of the differences between testing periods and between advanced and beginning classes are shown. Of the 49 comparisons drawn for the items only three differences are statistically insignificant. These three instances are: 1. March-June totals in Chins (caused by the inclusion of several hundred new freshmen and sophomores with the advanced students; 2. March-June advanced class Push-ups in part caused by loose classification into advanced and beginning sections, and 3. March-April totals in Standing Broad Jump which is approximately significant. One other comparison which is negative but significant is the March-June totals in Push-ups on the floor is again entirely explained by the inclusion in these totals of new untrained freshmen and sophomores.

Summary of Rates of Achievement By Advanced Classes. As evidenced by August 10, 1942, tests in initially utilized measures the gains over a five-month period in the seven events are summarized as follows:

1. Averages in the Brace Test over the four testing periods by the now advanced groups are 14.63, 16.24, 16.43, and 17.45, respectively. This is a total gain of *19%* in the five months. This was a gain of 6.70% since the June 10th report.

2. Burpee Test averages similarly are 5.32, 5.96, 6.46, and 7.24. This indicates a gain of *36%* in the five months. A gain of 15% since June 10 is indicated.

3. General Motor Quotient, a supposedly innate somewhat static measure shows the following series of averages: 97.30, 102.32, 102.50, and 105.51.

TABLE II. STATISTICAL ANALYSIS AND RELIABILITIES
(Additional Items—Third Semester)

Event or Test	June 10	August 10	Comparisons between Test Periods			
			Fact	June-Aug	Groups* June-Aug	Norm
Dips on Bars						
Totals	M— 4.86±.12 σ — 3.27 N — 708	M— 6.54±.15 σ — 3.75 N — 587	Dif. % C.R.	1.68 35 8.52	2.05 46 8.91	8.43
Beginners	M— 4.49±.17 σ — 3.21 N — 339	M— 6.21±.20 σ — 3.56 N — 301	Dif. % C.R.	1.72 38 6.43		
Advanced	M— 5.43±.17 σ — 3.27 N — 369	M— 6.81±.25 σ — 3.76 N — 295	Dif. % C.R.	1.38 25 5.11	2.32 48 8.38	
Larson's Strength						
Totals	M—293.8±2.3 σ — 62.10 N — 706	M—317.8±2.2 σ — 54.75 N — 620	Dif. % C.R.	23.95 8 7.46	32.95 12 8.26	279.
Beginners	M—284.8±3.3 σ — 61.65 N — 341	M—310.4±3.2 σ — 56.00 N — 310	Dif. % C.R.	25.59 9 5.55		
Advanced	M—302.8±3.1 σ — 58.28 N — 365	M—325.9±2.9 σ — 52.50 N — 310	Dif. % C.R.	23.20 8 5.45	41.15 14 9.20	
60 Yard Dash						
Totals	M— 8.06±.02 σ — .60 N — 690	M— 7.77±.02 σ — .48 N — 552	Dif. % C.R.	.29 4 10.32	.56 7 15.55	8.4"
Beginners	M— 8.33±.03 σ — .60 N — 328	M— 7.81±.03 σ — .51 N — 255	Dif. % C.R.	.52 6 12.09		
Advanced	M— 7.91±.03 σ — .63 N — 362	M— 7.73±.02 σ — .41 N — 297	Dif. C.R. %	.18 2 5.00	.60 7 16.66	
440 Yard Run						
Totals	M— 68.6±.29 σ — 7.4 N — 673	M— 67.99±.26 σ — 5.80 N — 510	Dif. % C.R.	.61 1 1.60	1.61 2 3.93	70.4"
Beginners	M— 69.6±.32 σ — 5.76 N — 324	M— 67.12±.35 σ — 5.34 N — 235	Dif. % C.R.	2.48 4 5.27		
Advanced	M— 67.8±.33 σ — 6.24 N — 349	M— 66.79±.30 σ — 4.94 N — 275	Dif. % C.R.	1.01 1 2.30	2.81 4 6.53	
2 Mile Walk						
Totals	M— 23.80±.10 σ — 2.57 N — 660	M— 22.97±.09 σ — 2.17 N — 510	Dif. % C.R.	1.17 4 9.00	.78 3 5.20	22.66
Beginners	M— 23.75±.12 σ — 2.08 N — 304	M— 22.60±.14 σ — 2.01 N — 237	Dif. % C.R.	1.15 5 6.76		
Advanced	M— 23.84±.14 σ — 2.69 N — 356	M— 23.28±.14 σ — 2.25 N — 273	Dif. % C.R.	.56 2 2.95	.47 2 2.61	
Drop-Off (endur.)						
Totals	M— 9.12±.02 σ — .57 N — 601	M— 8.74±.03 σ — .68 N — 465	Dif. % C.R.	.38 4 9.74	.35 4 7.61	8.40?
Beginners	M— 9.09±.03 σ — .56 N — 287	M— 8.83±.05 σ — .70 N — 213	Dif. % C.R.	.26 3 4.48		
Advanced	M— 9.15±.03 σ — .60 N — 314	M— 8.74±.04 σ — .65 N — 252	Dif. % C.R.	.41 4 7.74	.35 4 6.73	

* All group gains in this column are compared with Beginners initial test.

The total gain in five months is *8%*. There was a gain of 2.45% since June 10.

4. In the chins (pull-ups) the averages were 7.02, 7.80, 7.85, and 8.82. A gain of *26%* is evidenced between the first and final testing periods. The actual gain is one and eight-tenths chins for the advanced population on the average. A gain since June 10 of 14% is shown.

5. In the push-ups from the floor the averages were 16.88, 18.45, 17.20, and 21.53. A gain of 4.65 push-ups by the average advanced class member is *27%* better than his initial performance, or 25% since June 10.

6. A gain of *8%* in the standing broad jump was attained by the following mean performances 83.60, 84.65, 87.83, 90.47. This is actually an increment of 6.87 inches for the average advanced class member and a gain of 3% since June 10.

7. Vertical jump gains of *15%* represent actual gains of 2.88 inches on the average achieved in this order: 18.82, 21.24, 21.20, and 21.70 by each advanced class member. This shows a gain of 2.35% since June 10.

Additional Items in Third Semester Study. Starting with the June 10 testing period a more complete battery of measures were included in the testing program and also in the developmental activities. The new items are explained below:

Dips. Parallel bars were inclined to accommodate short or tall performers. The first mount counted one dip but no half credits were given. Wooden dipping bars can be easily built for less than ten dollars.

Larson's Dynamic Strength Test. Chins, dips, and vertical jump are weighted according to the author's scales. No new items are introduced in this measure.

Sixty-Yard Dash. In this event runners were paired. The stop watch clocked the time of the first man. The time of the second man was taken by counting the number of 5-foot zones he was behind the winner. One-fifth second was added to the winner's time for each zone between the two men at the finish. Stop watch and squad cards were needed.

Quarter-Mile Run. This event was run by squads of 8-10 men. All were started at the signal and the time to the second was called out as each man finished. Equipment same as for Sixty-Yard Dash.

Two-Mile Walk. Walkers were required to always have one foot on the ground and to plant the heel first. The entire class was started at the same time. Care was taken to note the two or three persons who overlapped. (The quarter-mile track was covered eight times.) The time was announced for the leaders each lap and final time for each person was given to the nearest 5-second period.

Drop-Off Index. This measure of endurance is obtained by dividing the time of the quarter-mile run by the time on the sixty-yard dash.

Summary of Achievements of Beginning, Advanced, and Total Student Groups in New Items. As evidenced by August 10, 1942, tests in additional items the gains over a two-month period in the six events are summarized as follows:

1. In the Dips on the parallels the gains for (1) beginning, (2) advanced, and (3) total classes were 38, 25, and 35 percent, respectively. Over the beginning classes the advanced classes gained 2.32 dips or 48%, the highest gain made on any item.

2. Larson Strength Test gains were similarly 9, 8, and 8%, respectively (all percents are rounded). Over the beginners a 14% gain was made by the advanced group.

3. The 60-yard dash gains were 6, 2, and 4%, respectively. The advanced pure gain being 7%.

4. The quarter-mile run gains were 4, 1, and 1%, respectively, the smallest gains of any item. Pure gain by the advanced group was 4%.

Summary and Analysis of Gains in Terms of the Objectives of the Physical Fitness Course

	% of gain	Initial Attainment	Final Means of Attainment	Mean Standard
Strength of arms and total body				
Chins	26	7.02	8.82	9
Dips	48	4.86	6.81	8.43
Push-ups	25	16.88	21.53	23
Larson Dynamic Strength Test	14	293.80	325.95	279
Velocity of Legs				
In time: 60 yards	7	8.06	7.73	8.4
440 yards	4	68.60	66.79	70.4
In vertical distance (V. Jp.)	15	18.82	21.70	19.25
In horizontal distance (st. br. j.)	8	83.60	90.47	90
Motor fitness (ability)				
Brace	19	14.63	17.45	15
Burpee	36	5.32	7.21	7
General Motor Quotient	8	97.30	105.51	100
Endurance				
440 yard run	4	69.60	66.79	70.4
Drop-off	4	9.09	8.74	
2 mile walk	2	23.75	23.28	22.66

5. Gains in the two-mile walk were 5, 2, and 4% with a pure gain of 2% for the advanced classes.

6. Drop-off Index gains were 3, 4, and 4%, a pure gain of 4% for the advanced classes.

From the above analysis in terms of the objectives of the course it can be observed that Indiana University men have made the largest gains in the area of greatest weakness—strength of arms and total body. Fair gains were made in the area of leg velocity in which the students are, on the average, above standard in all events. In motor ability a similar status exists. In the area of endurance the smallest gains are made and there is in general room for improvement especially in walking.

Recommendations

1. Strength is being gained rapidly but is below standard especially in the upper girdle work. More activities developmental of arms and shoulders should be included in the program.

2. In each velocity measure performance is above standard. This level should be at least maintained.

3. In motor fitness (ability) performances are all above standard. These levels should be at least maintained.

4. Endurance gains are in each instance quite low and performance is generally below standard. The worst condition prevails in the 2-mile walk. Hiking should be adopted as originally planned and interspersed frequently. Gains *not made* cannot be measured. Endurance takes time and proper living is a necessary supplement.

5. All standards are made for ordinary circumstances. In war emergency physical fitness programs abundant gains must be sought.

6. The program is on the whole making quite commendable gains. However, these averages also indicate that fifty percent of the students are below the indicated performances. The aim should be to bring the lower fifty percent to the standard.

7. The significant differences in all events between groups indicate a need for (1) beginning, (2) intermediate, and (3) advanced classes in the future.

Conclusions

The average public school physical education program provides but 17 hours a year in which to make gains, according to careful observation and study. The above gains in college age men show conclusively: (1) That the average beginning college man is at present unfit physically, and (2) that given adequate time allotment a planned program and trained teachers real gains toward definite objectives can be made. If endurance is to be acquired the conditioning process must start in the public schools.

It is hoped, and there is reason to believe, that such evidences as are outlined above will lead to the realization (after the war need for fitness to die is passed) that the need for fitness for the fullness of life can be partially met by a sound program of physical education.

COMBATING JUVENILE DELINQUENCY WITH RECREATION

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During the past five years the Department of Physical Education of the University of Denver has received a number of requests from the Police Department, the Juvenile Court, and certain social agencies to examine the problem of juvenile delinquency and attempt a solution. It should be said at the outset that we are not sociologists and therefore approached the task with great humility. However, we enlisted the aid of available sociologists and educators and with groups of graduate students made a survey and spot map of the city as a whole to discover which localities had the greatest incidence of delinquency. We then concentrated our efforts with a more detailed survey of these parts of the city where crime occurred most frequently. A running report of these delinquency area-surveys has been presented before various research groups from time to time. Our findings in these studies paralleled similar surveys made by social investigators in other municipalities and showed that crime tended to be more prevalent in those parts of the city devoted mostly to industry and commerce. This condition has been aggravated by the overcrowding that has followed war industries. Also it was found that in those localities where business interests were engulfing former residential centers, delinquency tended to increase. It was further noted that crime flourished in those neighborhoods where old dilapidated dwellings were allowed to remain. In those neighborhoods with buildings of this type it seemed to the investigators that delinquency lurked as a hidden virus that would attack any group of people who happened to occupy them. No group showed any apparent immunity. For example, one such neighborhood has been populated in turn

during the past thirty years with German, American, Colored, and Spanish-American peoples. All of these racial groups have maintained the unsavory reputation of this section of the city.

Other characteristics of the delinquency areas included such factors as inadequate playgrounds or recreation centers. Also, that there are relatively few churches or other character building agencies in these districts. Then there is the constant struggle involving religious and racial intolerance, with the usual conflicting concepts and traditions, coupled with an uncertain economic outlook. However, it is significant that these neighborhoods were abundantly supplied with pool halls, picture shows, and saloons or taverns. It was also observed that the crime curve showed seasonal fluctuations; it was highest during October and November, dipped during the holidays and would rise again during February, March, and April, reaching its lowest level during the summer months. The part of the day when crimes were most numerous coincided with the usual free time of people, i. e., between the hours of 3:30 in the afternoon and 10:00 o'clock at night.

Studies were then made of the individual wrongdoer and his particular group. The findings give overwhelming evidence that delinquency, as such, is symptomatic. That is, it is but an outward manifestation of some deeper, more hidden difficulties. On examining these underlying or basic troubles it was apparent that they fell into at least two parts. The first might be called the "static", which includes such items as: the physical set-up of the community, the type of houses, the number of people occupying each house and the sanitary facilities in the house. Also it was necessary to reckon with the condition of the neighborhood, the proximity and kind of industrial or commercial plants, the amount of open space, and the condition of this open space. This last ranged all the way from landscaped public parks with adequate play facilities to city dumps and waste land. The types and details concerning the commercial recreation opportunities also fall under the static classification and was looked upon as such.

The second part may be designated as the "dynamic factor" and would include the human element and the part played by the child's association with people. Also, it takes into consideration such perplexing questions as the influence of race, religion, education, traditions, and esthetic appreciations. All these elements of human relations tend to modify the reactive behavior of the individual. Another aspect of this problem is concerned with the mental equipment of the youthful wrong-doer. Mentally deficient persons are frequently involved in antisocial behavior. These youngsters are more easily led into delinquencies and are more likely to become criminal than those of normal intelligence. Again, children with an I. Q. of 85 or below often lack the discriminatory sense necessary to distinguish right from wrong. Between one-sixth to one-third of youthful delinquents are found to be feeble-minded.

A detailed study then of youthful offenders revealed that in the main their delinquency was superinduced by at least one of the following conditions: (1) Condition of the home and family relations, (2) the mental equipment of the individual, (3) the economic status, (4) the neighborhood, and (5) the leisure time outlets, traditions and training.

None of these factors could be changed to any extent by any thing that we could do. Such problems as: slum clearance, intelligent city planning, and the providing of adequate recreational opportunities, are conditions that must be changed by enlightened generations of the future.

The home is still the center of our present social order. There is therefore, still much to be done in the field of training young people how to be worth while parents. Parenthood should be looked upon as the greatest profession and not as an accident of a biological urge. Parents should appreciate at the outset that all children have two basic rights: one, the need for security, and the other, the opportunity for wholesome development, i.e., health, education and play. Delinquency appears whenever these needs are not adequately satisfied. The juvenile offender invariably is a youth who is delinquent as a result of his effort to solve some problem growing out of the conflict of his needs and those of the group. By way of illustration, when the child's sense of security in the home is jeopardized by poverty and economic stress, his attempt to rectify the condition, if thwarted by circumstances that deprive him of the right to earn a living by approved methods will probably lead to stealing or gambling in one of their many forms. When success attends these predatory economic attempts, that is, if they are not caught and they "get by" with it, these youngsters are likely to repeat the experience and continue doing so until their sense of social responsibility is completely distorted. They soon rely upon stealing or gambling for a livelihood and develop a philosophy of life that is decidedly antisocial. There is also considerable thrill in both stealing and gambling. The challenge to pit one's skill and knowledge against another's even when the stakes for failure may be prison or even death, satisfies a deep and underlying urge. This perhaps accounts in part at least for the so-called "thrill criminal." As regards this emotional excitement that comes as the result of certain illegal practices, we must point out that not all cases of delinquency come from the so-called under-privileged areas but from homes of the relatively well-

to-do. An examination of these cases again showed that these youth, with their abundant material advantages, were victims of neglect and misunderstanding. Again the influence of the home was apparent. In those cases where there existed low cultural and ethical standards in the home, or where there was laxness in the living regime, such as smoking, drinking, gambling or unsocial parent-parent or parent-child relationship, it was observed that difficulty followed. Trouble was also encountered in those homes where parents were either over-solicitous or overbearing and thus made life burdensome with constant nagging and driving.

A study of gangs showed that they were formed, consciously or unconsciously, as a means of providing an avenue of escape from certain unhappy or untenable conditions in the home or neighborhood. Gangs also seemed to satisfy the gregarious urge, they made one feel that he "belonged", that his opinions and ideas were at least listened to. He was given responsibility of sorts and his urge to worship a hero was often satisfied. As is to be expected, leaders of gangs are not graduates of recognized leader-training courses, and therefore give little heed to the negative end-results that their programs or activities often develop.

In the light of this complex social situation, what may we as physical educators do? I submit seven points for consideration which we have found to be basic:

1. It is necessary to believe in the inherent goodness of people and proceed on the premise that all things else being equal, they will select the outlets of greatest worth.

2. We must realize that delinquency is but a symptom of some deep-seated difficulty which we may or may not be able to remove.

3. That our program, by its very nature, is adapted to solving this problem; this is because it is primarily a program that operates during the free time of people.

4. From the point of view of character growth, free time is the determining factor, because it is then that the young person may choose his method of expressing himself. How and what he chooses depends upon his training and appreciations, the facilities at hand, and his traditional background.

5. That we as educators must take into account the existence of powerful rivals in the form of commercial recreation. These forces are relentless when bidding for the free time of people. Their influence is profound. In this connection, studies* elsewhere have shown the close relationship that prevails between certain types of commercial recreation and juvenile delinquency. One recorded study* states that it believes:

"The low-grade pool room is the chief hangout of the crook and more burglaries among boys between the ages of sixteen and twenty-one are concocted there than in any other single place."

"It is significant that a relationship exists between the two. What this relationship is, is still obscure, but it indicates the need of comprehensive studies of these problems from a sociological, psychological and physiological point of view on a national scale."

6. Leisure time is on the increase and so are its hazards.

7. That a modern standardized and mechanical industrial life makes for monotony and boredom and to escape from these conditions people will find relaxation and relief in play in one form or another.

Our path then is clear. We must offer our community a program that will appeal to the needs of the particular group under consideration. Our aim must be formation, not necessarily reformation. It must be a program of action, challenging, and with a promise of observable achievements. Such a program must satisfy the social urge in a fine and wholesome way. It must give outlet for creative self-expression, in literature, in art, in music, in dramatics, and other social experiences. Also, there must be abundant opportunities for physical activity in a wide variety of ways. This program must also give rest and spiritual inspiration. From such a plan of procedure comes the concomitant opportunities involving choices, attitude, emotions reactions toward others and satisfaction and faith in one's self. These values accrue, however, only under conditions where an adequate program is set up; there must be enough facilities, proper equipment and materials and above all, trained, inspired, and properly compensated leadership.

Directors of community recreational projects must not only minister to the immediate needs of the group but must develop in the community an awareness of the values that may be gained from such projects. People in each neighborhood, regardless of the economic status of their community, must be trained to appreciate the fact that it is far better to establish and maintain at whatever cost, a program designed for the worthy use of leisure with its wholesome, stimulating end-results. These neighborhood groups must choose between this situation and one in which they will be constantly taxed for the detection, apprehension, conviction, and incarceration of the wrong-doer. Communities must be educated to capitalize upon their native endowments and to create their individual recreational experience rather than attempting to mimic others or passively receive conventional entertainment. This desirable attitude of community responsibility unquestionably teaches ethical

* "A Study of Delinquency in a District of Kings County."

behavior, develops artistic appreciation and creative expression, in the art of living, and human relationships. This point of view may easily modify the sense of value and add to human happiness.

It would seem that the present condition of society is our opportunity. It is hoped that we will be shrewd enough and sufficiently prepared to take advantage of our chance. People have long sanctioned our presence in the educational scene on the grounds that we have the power to make for better physical health in those with whom we come in contact. Perhaps we may take one further step, that is, demonstrate our value by ministering to the social aspect of communal living.

EDUCATION AND SOCIAL PROGRESS

Cultural progress is affected unappreciably by biological change. Education is the sole means of rapid change, since nature is practically permanent. The problem, then, of education is to improve social culture and to disseminate the improvement.

K. W. B.

PHI EPSILON KAPPA FRATERNITY OPEN DISCUSSION MEETING

New Orleans Meeting of American Association of Health, Physical Education, and Recreation
April 15, 1942

WILBUR DeTURK, Chairman

"Health and Fitness—Whose Responsibility," was discussed by various members of the organization who had been assigned phases of the topic.

Dr. J. Kistler of Louisiana State University presented the Health Instruction phase. He deplored the lack of it in the secondary schools and stated we must teach the individual his responsibility in maintaining his own fitness. Furthermore, there is need of a classification of thinking as there are too many misstatements due to not keeping abreast of the times. In closing Dr. Kistler stressed that the leaders in our field must practice what they preach.

Dr. A. F. Davis of Penn State College spoke in reference to physical fitness being the result of long hygienic living. As a further means of developing a physically fit population Dr. Davis suggested depriving certain individuals through medical and legal means (the unfit) of propogating. Through health service for all and a remedial program run by people who know their work much progress, Dr. Davis believes, can be attained in getting physically fit individuals. The need for all persons participating in physical education activities to have a medical examination was stressed.

Mr. Pritzlaff of the Public Schools of Chicago, Ill., indicated we must be taught to know how to play. We must learn to think in terms of the values to be derived and then play accordingly team games and combative games which will develop the will to win. Since interscholastic athletics are a part of the educational program in its entirety, the coach should be rostered for his activity the same as any member of the faculty is rostered for an assignment. This seems justifiable since the results of the coaches efforts are easily measured and not intangible like other phases of education. Mr. Pritzlaff indicated the administration of athletics might in some areas be justifiably criticized and, therefore, the necessary adjustments should be made so that athletics will contribute their share toward fitness.

Mr. Streit of the Public Schools of Cincinnati, Ohio, pointed out that although the expansion of physical education has shown the adaptability of the school to change to meet the need, there is still a great deal to be done. Much of the burden for further improvements rests with the home, the community and the school. Furthermore, if petty jealousness between various agencies of the community can be eliminated and if parental indifference towards the defects of the children can be improved the possibilities of avoiding imperfect adults will be increased. Through wise counseling and close cooperation these three—the home, the community, the school—can accelerate our efforts towards fitness.

Mr. Fred Foertsch of the Public Schools of Philadelphia offered the intramural program as an adjunct in the conditioning of pupils. This program could originate in the regular school day and many useful skills could be included in it. Noncompetitive activities like swimming, hiking, bicycling, roller skating, rowing and the like could receive emphasis in intramural programs. However, even these activities call for a medical examination of the participants as a check towards the attainment of physical fitness rather than the further degeneration of the physically handicapped.

Dr. Jackson Sharman, University of Alabama, intimated that the school recreation program should provide the individual with the artistic and creative activities he needs for his leisure time.

Mr. John Benke of the Public Schools of Los

Angeles, Cal., advocated the provision of special guidance for those needing physical corrections, especially those returning from an illness, because too often children in this category are lost in the shuffle and irreparable damage may result to organs already weakened by illness. The value of correctives needs no justifications and therefore the need of a special (corrective) teacher is evident in our program and certainly should be included in our attempt to obtain physically fit youths. Perhaps a community clinic offering special rates or very nominal ones could be organized as a supplement to the school program of correctives.

Mr. Martin Trieb, also of the Public Schools of Los Angeles, Cal., stated the keynote of physical education is the will to do, the will to become physically fit, to succeed, to excel. If that will can be developed then we can see the reaction of the individual to those tenets, and the objectives of organic stimulation will be fulfilled; skill, strength, stamina, courage, vigor, all elements essential for physical well-being.

In summary comments it was suggested that physical fitness be called total fitness. A full physical examination ten to twenty minutes in length at periodic intervals should supplant the superficial one or two minute school medical examination of the present. This, with continued drive and emphasis for correction of defects until we reach our goal of fitness, is necessary.

A HOMOGENEOUS GROUPING OF JUNIOR HIGH SCHOOL GIRLS FOR PHYSICAL EDUCATION

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It is the purpose of this study to formulate a classification in physical education for junior high school girls which will produce homogeneous grouping, be easy to administer, and be as economical or more economical in both cost and time than previously recommended classifications.

A previous study[1] in administrative grouping of junior high school boys indicates that first sectioning the total school population into thirds by Strength Index and secondarily grouping the thirds into halves by Physical Capacity Index was a procedure to be preferred to grouping by either factor alone. The theory back of such a grouping is that by grouping pupils by one factor at a time the effect of each classifier will be to produce a homogeneity in that factor with no overlapping in successive groups. Such homogeneity does not exist when two or more factors are combined statistically, and ability sections formed from this combination.

Age, height and weight combinations alone are not sufficiently valid and of very little value for classifying junior high girls for athletic competition according to Eleanor Groff Adams[2] and this fact is corroborated by Dorothy Humiston[3]. The Humiston Motor Ability Test, designed to measure one's present status of motor ability, is based on running, climbing, dodging, and getting off the floor in the fastest time possible. This test is valid, reliable and objective, economical in time and money to administer, but, according to the author, needs further research on the secondary school level.

The criteria for evaluating the proposed administrative grouping will be the same as that used by a former study of administrative grouping[4]. They are in order of importance: 1. *Correlation with the Criterion of Performance;* each classifier should have considerable correlation with the criterion of physical education performance. 2. *Regularity of Increments;* successive groups formed by this procedure should have progressively higher averages in performance. 3. *Reliable Critical Ratios;* the critical ratios of the differences between average performances of successive and adjacent groups should be equal to or exceed 2.5, that is be statistically reliable. 4. *Average of Critical Ratios;* while two groupings may have an equal number of significant critical ratios that one having the highest average critical ratio will, other things being equal, be superior. 5. *Average Difference in Criterion Performances;* the wider the

[1] Bookwalter, Karl W., *A Critical Evaluation of Some of the Existing Means of Classifying Boys for Physical Education.* Research Quarterly, Vol. X, No. 5, 1939, pp. 119-127.

[2] Adams, Eleanor G., *The Study of Age, Height, Weight, and Power as Classification Factors for Junior High School Girls.* Research Quarterly, Vol. V, No. 2, 1934, pp. 95-100.

[3] Humiston, Dorothy, *A Measurement of Motor Ability in College Women.* Research Quarterly, Vol. VIII, No. 2, 1937, p. 181.

[4] Bookwalter, *op. cit.*, pp. 119-127.

HUMISTON	C. I. F.		
	Up to 25	26 to 32	33 and Up
UPPER HALVES	Group 5 Total Scores In Individual Athletic Events A M = 292.2 σ = 52.5 V = 17.96 N = 60	C.R. = $\frac{12.2}{9.4}$ = 1.29 Group 3 Total Scores In Individual Athletic Events A M = 280 σ = 50 V = 17.8 N = 58	C.R. = $\frac{10.3}{10}$ = 1.03 Group 1 Total Scores In Individual Athletic Events A M = 290.51 σ = 54.4 V = 18.76 N = 51
	46.9 and Less C.R. = $\frac{81.9}{8.9}$ = 9.2	C.R. = $\frac{30.9}{9.2}$ = 8.7 47.8 and Less C.R. = $\frac{68.68}{9}$ = 8.7	C.R. = $\frac{39.8}{10.3}$ = 3.86 48.9 and Less C.R. = $\frac{40.11}{11}$ = 3.64
LOWER HALVES	47 Up	47.9 Up	49 Up
	Group 6 Total Scores In Individual Athletic Events A M = 210.31 σ = 44 V = 20 N = 57	C.R. = $\frac{10.01}{8.5}$ = 1.18 Group 4 Total Scores In Individual Athletic Events A M = 211.32 σ = 54 V = 25.55 N = 55	C.R. = $\frac{38.9}{10.1}$ = 3.85 Group 2 Total Scores In Individual Athletic Events A M = 250.2 σ = 56 V = 22.4 N = 50

Chart 1. Criterion Scores of Primary Groupings into Population Thirds by C. I. F. Index and Secondary Groupings by mid-points of Humiston's Motor Ability Test for Junior High Girls.

C. I. F.	HUMISTON		
	50.6 Up	50.5 to 45.1	Up to 45
UPPER HALVES	Group 5 Total Scores In Individual Athletic Events A M = 241.5 σ = 61.5 V = 25.5 N = 53	C.R. = $\frac{19.5}{9.8}$ = 1.9 Group 3 Total Scores In Individual Athletic Events A M = 261 σ = 39 V = 14.9 N = 60	C.R. = $\frac{43.25}{8.4}$ = 5.1 Group 1 Total Scores In Individual Athletic Events A M = 304.25 σ = 52.5 V = 17.2 N = 60
	30 and Up C.R. = $\frac{30}{10.3}$ = 2.9	C.R. = $\frac{5.3}{10.3}$ = .51 29 and Up C.R. = $\frac{14.2}{7.7}$ = 1.8	C.R. = $\frac{17}{8.2}$ = 2.07 28 and Up C.R. = $\frac{26.25}{9.4}$ = 2.7
LOWER HALVES	Up to 29	Up to 28	Up to 27
	Group 6 Total Scores In Individual Athletic Events A M = 211.5 σ = 43.5 V = 20.6 N = 54	C.R. = $\frac{35.3}{8.3}$ = 4.2 Group 4 Total Scores In Individual Athletic Events A M = 246.8 σ = 42 V = 17.0 N = 51	C.R. = $\frac{31.2}{8.7}$ = 3.5 Group 2 Total Scores In Individual Athletic Events A M = 278. σ = 47.7 V = 13.5 N = 54

Chart 2. Criterion Scores of Primary Groupings into Population Thirds by Humiston's Motor Ability Test and Secondary Groupings by mid-points of C. I. F. Index for Junior High Girls.

differences between the mean criterion performances of adjacent groups the more homogeneous such groups must of necessity be. 6. *Administrative Difficulty of Measures;* may be determined by the number of items to be administered and also by the simplicity of these items. 7. *Average Variability of Groups;* since the essence of classification is homogeneity that grouping productive of the least variability is best. The coefficient of variability (V) will be considered a criterion of this condition. The smaller the "V" the more homogeneous the group. 8. Finally the *intercorrelation of the classifiers* should be relatively low.

The Criterion Measure

Five individual athletic events were chosen as criteria, namely: 1. Jump and Reach (leg velocity), 2. Basketball Throw for Distance (arm and shoulder velocity), 3. 50-yard Dash (leg velocity), 4. Basketball goal shooting (hand and eye co-ordination), 5. Base Running (leg velocity and agility); all are accepted factors for measuring physical education performance. The subjects, 350 junior high school girls in regular gymnasium classes, were given the criterion and classifying measures. The events were first scored on the scale score for the pupil's respective age-height-weight classifications, according to Neilson and Cozens[5]. These results were ineffectual in obtaining homogeneity because the age, height, and weight were held constant by reason of the fact that scale scores are set up for each age-height-weight group. Therefore T-scores were computed for each event for the entire group of girls. The criterion used in this study is the sum of the modified (6 σ) T-scores in the five events thus obtained.

FINDINGS

For the Humiston test no correlation with the criterion of performance was computed since Humiston found a correlation of .92 $\pm$ .008 between her battery of seven selected items measured as one unit and fifteen performance items measured separately. Age-height-weight classifications while low in validity for girls are nevertheless positively related.

The first application of administrative grouping in this study, namely a primary division of the total group into thirds by the C. I. F. (Neilson and Cozens Index of Age, Height and Weight) and a secondary breaking of these first groups into halves by the Humiston Test can be analyzed by referring to Chart No. 1.

1. The increments are not regular, the groups overlap in three instances. Group No. 3 with No. 2, Group No. 5 with No. 4, Group No. 5 with No. 3.

2. Three of the critical ratios are not 2.5 or above, and the average is only 1.46.

3. The co-efficients of variation are larger than in the second application and the average V is 20.5 as compared with 16.28 in a previous study[6].

4. The average difference in Criterion Performance is 14.71 when overlapping differences are subtracted rather than added to find the average difference.

5. There is apparently a low correlation between the two classifiers since the Humiston mean is approximately equal for each C. I. F. third.

The second administrative grouping applied was formed by dividing the total group into thirds by the Humiston Motor Ability Test and breaking these thirds into halves by means of the C. I. F. Index. In this instance by referring to Chart No. 2, page 7, it will be seen that:

1. The increments are regular; there is no overlapping.

2. Four of the critical ratios are below the accepted 2.5, however the average is 2.79 as compared with 1.46 in the first application.

3. There is a great deal of difference in the co-efficients of variation, the average for this group being 17.9, which compares favorably with 16.28 obtained in the study by Bookwalter, mentioned previously.

4. The average difference in criterion performance in this application is 22.18 as compared with 14.71 in the first application.

The correlation of the Humiston Test and C. I. F. in this application must of necessity be low since the median point in C. I. F. is practically the same regardless of the Humiston group in which the C. I. F. median is computed.

An imperical study of cases by the author who has known the individuals for two semesters or more places, in most cases, the individuals in the same classification as the test places them.

CONCLUSIONS

On the basis of the data secured the administrative grouping into primary thirds by the Humiston Test and breaking these thirds into halves by means of the C. I. F. provides the more homogeneous, yet simple and economical, classification. Besides the functional division by the Humiston Test, adjustment of hulk and maturity by the C. I. F. contributes to safety by equalizing size of pupils and to motivation by producing a more sociological and phychological grouping of pupils, than does either of the tests separately.

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[5] Neilson, N. P., and Cozens, F. W., *Achievement Scales in Physical Education Activities for Boys and Girls in Elementary nad Junior High Schools.* A. S. Barnes and Company, New York, 1934, p. 6.

[6] Bookwalter, K. W., Ballin, Ralph, and Bookwalter, C. W., *A Simple, Economical, and Valid Administrative Ability-Grouping of High School Boys for Physical Education.* Unpublished study.

RECOMMENDATIONS

1. A simple study to compare actual grade attainment of girls placed in these homogeneous groups to determine the portion of pupils in a certain grade in each ability group would be enlightening.

2. The pupil population must be large enough to warrant 12 sections or two classes of each group, before such a classification would be feasible. Three hundred and fifty girls would suffice.

3. Best results would necessitate a classification of activities to suit the needs of girls so classified.

AN INVESTIGATION OF EXISTING METHODS OF RATING PUPILS IN PHYSICAL EDUCATION

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Physical education has come to be recognized as a field of education. For a long time it was considered just exercise. It now includes, in addition to the manifold sports and athletics carried on in the gymnasium, natatorium, and athletic field, such activities as health and hygiene, safety education, corrective gymnastics, and medical and physical examinations. It aims to provide a program of wholesome activity for every boy and girl in the light of his or her individual physical needs and capacities. Physical educators feel that their field has advanced sufficiently to assume a position on a par with any other field of education.

Bovard and Cozens[1] say,

> "We claim this field (physical education) is just as essential as any other in the general make-up of educational practice, that an education of one's physical self to live an abundant life is as necessary as an adequate training in the traditional cultural branches. Furthermore, we are discovering that physical education, to be complete, must express itself in situations that are not only physically wholesome but also mentally satisfying and stimulating, and socially sound."

Thus physical education, if it is to be considered on a par with other phases of education, must conform to the accepted principles and methods of education generally. This is especially true of the formulation of aims and objectives and of an evaluation of outcomes. The aims of physical education have been fairly well defined. Briefly, "the program in physical education is directly concerned with those activities which promote organic power and neuro-muscular skill together with social understandings and appreciations appropriate for democratic living."[2]

Evaluation of outcomes, on the other hand, is not so well defined, nor so clearly understood. There is need of a method of measurement which will determine progress toward both immediate and remote objectives. Bovard and Cozens[3] state this need as follows:

> "Is it important to know the progress of the boy or girl in a physical way? It is, and vitally so, if we are to plan for his future development, if we are to show him wherein he can improve himself and direct him into activities that will be of value to him in life."

To reinforce this statement, one by McCloy[4] can be added,

> "As a science it (physical education) is effective in proportion to the validity of its methods; it must progress by experimentation and by measurement, for quantitative methods are the key to accurate knowledge of results. As an art, also, physical education profits from such methods of objective measurement as are of interest and profit to the pupil; for by the use of such measurements, purposeful practice is motivated and is made more meaningful and interesting."

Physical educators have been acutely aware of this need and in the past few years have made great progress in the development of measuring

[1] Bovard, J. F., and Cozens, F. W., *Tests and Measurements in Physical Education*, 1930, p. 7.

[2] Progressive Education Association (Committee on Workshops), *Physical Education in the Secondary School*, 1940, p. 23.

[3] Bovard, J. F., and Cozens, F. W., *op. cit.*, p. 17.

[4] McCloy, C. H., *The Measurement of Athletic Power*, 1932, p. vii.

devices. Cozens, Trieb, and Neilson[5] cite this progress:

> "One of the most significant changes which has taken place in physical education during the past few years has been the scientific attitude displayed by men and women in approaching its problems. There has been a growing tendency to provide more and better measuring devices which enable the teacher to better evaluate his program. It has been discovered that the measurement of achievement in physical education activities is essential to an efficient program of instruction, and that boys must be placed in properly classified groups to ensure the scientific accuracy of this measurement."

It is true that many instruments of measurement have been developed, such as achievement scales, strength tests, physical fitness indexes, etc., but it is also true that none has proved satisfactory. A good testing program should have certain characteristics. It should:

1. Measure progress toward objectives.
2. Be easy to administer.
3. Be economical in so far as time is concerned.
4. Be valid.
5. Be reliable.
6. Be broad enough to include a fairly wide range of activities.
7. Stimulate pupil interest when progress is evident.

In addition to the above requirements the testing program should provide the basis for a report card mark. To date no test in the field of physical education has been devised which meets all of these requirements.

One result of an inadequate rating method is that marks or grades in physical education hold little meaning and are considered unimportant by pupils, parents and administrators. It ought to be added that an inadequate measuring instrument is not the sole reason for this lack of respect for marks in physical education. In many school systems physical education does not carry credit toward graduation, and this fact contributes more to a lack of proper regard for physical education marks, especially by students, than does an inadequate method of rating. Repeated attempts have been made by physical educators to win credit toward graduation for their subjects, but so far most of them have failed.

It is, however, the belief of the writer that a good rating method, based upon scientific measurement, would not only increase respect for physical education marks, but would help immeasurably in winning credit toward graduation for physical education activities. There seems to be no sound reason why credit should be granted for all other subjects and not for physical education.

There are several reasons why an efficient and reliable method of rating has not been developed. 1) Classes in physical education are generally very large, running in size from seventy-five to one hundred, and creating a testing problem not usually found in other classes. 2) Physical education classes have less time than other classes meeting for the most part twice a week instead of five times per week as is the case in nearly all other subjects. Then, too, time is used getting into gymnasium suits, and allowances must be made for showers and dressing at the end of the period. A period which is normally fifty minutes for actual classwork, would provide approximately thirty minutes for actual classwork. McCloy[6] cites additional obstacles,

> "A measurement in the field of physical education presents somewhat different problems from that in the field of mental education. We have as yet in the physical education field no sufficiently adequate tests of original motor capacity that correspond in validity to the tests of original mental capacity. This is partly because of the wide difference in experimential background in physical activities of pupils of the same age. If an intelligence test is applied to, let us say, the eighth grade, the pupils tested have what corresponds to seven grades of school background which has been very much the same. In physical education measurements this is not at present usually true. Pupils vary in physical education background from city to farm, from tenement to playground. In addition, the element of bodily size complicates matters in a way not found in the case of intelligence testing."

From what has been said thus far it can be seen that the problem of developing a dependable rating method in physical education is not a simple task. It has baffled many a physical educator. This fact should not, however, deter teachers from using available measuring instruments. Much progress has been made in the past few years and more progress, it is to be hoped, will be made in the years just ahead. In the meantime available tests will have to be used, if for no other reason than that from experimenting with these devices better methods will emerge. For they are not without values, their experimental worth alone being of no small assistance to workers in the field.

As a matter of fact, most teachers of physical education use a number of testing devices. That these instruments are inadequate is not so im-

[5] Cozens, F. W., Trieb, M. H., and Neilson, N. P., *Physical Education: Achievement Scales*, 1936, p. 3.

[6] McCloy, C. H., *op. cit.*, pp. vii-viii.

portant as is the fact that nearly all physical educators have concerned themselves with this problem and are striving to remedy the situation.

In attempting a solution of a problem, this one included, the first step should be a survey of existing conditions and hence the purpose of this paper is 1) *to survey* existing rating procedures in physical education so that they can be analyzed and from this analysis 2) *to attempt* to indicate the direction in which improvement might be made.

The data for this paper were obtained by sending questionnaires to one hundred sixty-five representative teachers and administrators of physical education. Replies were received from one hundred fifteen men and women distributed among twenty-nine states and seventy-seven cities. Included in the return were teachers of girls, teachers of boys, heads of departments in high schools, twelve directors of city systems of physical education, and one principal. Schools of varying sizes are included, three hundred pupils being the smallest and one school in Chicago of seventy-two hundred being the largest. Most of the schools fall between eight hundred and fifteen hundred enrollment.

The questionnaire consisted of twenty-two questions designed so that from them could be determined.

1. The nature and scope of the total physical education program in each school.
2. The extent to which pupils are being rated, if at all.
3. The method of rating.
4. The amount of credit granted toward graduation, if any.
5. Amount of time pupils devoted to physical education each week.
6. Problems of particular significance in the measurement of ability to swim.

It is recognized that a questionnaire type of investigation has certain limitations. Sometimes parts of the questionnaire are not clearly understood and hence answers are incomplete and are occasionally omitted. The writer had difficulty in interpreting some of the answers. Then, too, some of the answers were of necessity based on subjective opinion; opinions which would vary with different individuals.

This survey attempted to overcome these weaknesses as much as possible. A tentative questionnaire was drawn up and sent to sixteen people who were asked to criticize it on the basis of clarity and also on the value of the questions included.

A second form was then drafted in the light of the criticisms received and this form was sent to twenty-one people in various parts of the country. The returns from these twenty-one people were carefully scrutinized for possible weaknesses in the questionnaire. Several of these weaknesses were found and strengthened before the third and final form was sent to the remaining one hundred forty-four respondents.

Before the question is asked, Do you rate in physical education? it is desirable first to find out what activities are included in the complete physical education program. The number and type of activities will determine, to a large extent, whether or not activities are rated and also the kind of measuring instrument used. If a school has just one activity in its program it is probably an easier task to rate pupils in that one activity than it would be if six or seven activities were being carried on and pupils were rated in all of them. The first item on the questionnaire, therefore, asks for a list of activities included in the program of physical education. Table I shows not only the activities listed but the frequency with which they appeared in the various school programs.

TABLE I

ACTIVITIES LISTED IN PHYSICAL EDUCATION PROGRAM AND THE NUMBER OF SCHOOLS INCLUDING THEM

Activity	*Number of Schools Including It*	*Percentage of Schools Including It*
A. Gymnasium Class Work		
1. Gymnasium Games	112	97
2. Athletics	107	93
3. Calisthenics	99	86
4. Rhythmic Work	97	84
5. Heavy Apparatus	68	60
6. Recreational Sports (Tennis, Golf, Badminton, Horseshoes, etc.)	20	17
7. Tumbling and Stunts	19	17
8. Marching Tactics	8	7
9. Social Dancing	4	3
10. Fird Aid	2	2
B. Intramural Activities	111	97
C. Hygiene	92	80
D. Interscholastic Team Competition	84	73
E. Safety Education	73	63
F. Corrective Gymnastics	61	53
G. Swimming	42	37

From the responses in Table I it would seem that the average high school physical education program is made up of 1) gymnasium class work which for the most part means gymnasium games, athletics, calisthenics, rhythmic work, and heavy apparatus, 2) intramural activities, 3) hygiene, 4) interscholastic athletics, 5) safety education, 6)

corrective gymnastics in more than one-half of the schools, and 7) swimming wherever natatoria are provided.

The next item on the questionnaire asked, "Do you rate pupils in physical education?" The answers to this question were:

Yes .... 109 or 95%
No .... 6 or 5%

It is obvious that pupils are being given some kind of rating in physical education activities, and there seems little doubt that a large majority of physical educators believe in giving marks in their subjects.

After ascertaining whether or not pupils are rated it seems logical to ask whether this rating is arrived at subjectively or objectively. Hence the question was asked, "Is this rating based on subjective judgment of the progress of the pupil or on objective achievement in particular activities?" The responses were:

Subjective judgment..... 21 or 20%
Objective achievement... 33 or 30%
Combination of both.... 55 or 50%

The responses to this question seem to be another indication of the uncertainty of rating procedures. Twenty per cent base their rating on nothing more than subjective judgment, although even among this group a number added that they considered such factors as regularity in attendance, the coming to class prepared for work, (with gym shoes and uniform) etc., before arriving at a subjective judgment of the pupil's mark. Fifty per cent seem to feel that neither subjective judgment nor subjective achievement alone is sufficient and therefore employ a combination of both methods.

Carrying the investigation of rating methods a step further the question was asked, "How do you arrive at this rating?" Five possible ways of arriving at a rating were listed, and all of the responses fell somewhere within the five ways suggested. The answers to this question are summarized in Table II.

It is very obvious that no single method or combination of methods is used by any considerable number of teachers. The combination of all five listed schemes is the most popular but that is used by only twenty schools out of one hundred fifteen.

An interesting sidelight is that skill tests form a part of the measurement programs in seventy-eight of the schools, pen and paper tests of knowledge are a factor in forty-three schools, teacher's judgment enters into the rating in eighty-six of the schools, regularity of attendance is considered of sufficient importance to be included in the marking schemes of seventy-eight of the schools, and desirable character and citizenship traits are a part of the rating in sixty-nine of the schools surveyed. Teacher judgment is employed more often than any of the other devices.

TABLE II
DEVICES USED TO DETERMINE PUPIL'S RATING

		Number of Schools	*Percentage*
A.	Series of skill tests....	5	4
B.	Pen and paper tests of knowledge	0	0
C.	Teacher's judgment...	6	5
D.	Regularity of attendance	1	1
E.	Desirable character and citizenship traits.....	0	0
F.	Numerous combinations of the above.....	95	83
G.	Did not respond.....	8	7
	Total	115	100

Several other facts are brought out by Table II. 1) Pen and paper tests of knowledge are not used as a sole means of rating in any school and in combination with other means, tests of this sort are used more infrequently than any of the other methods. 2) Desirable character and citizenship traits are not used as the only basis for marking in any school and even in combination with other factors is a less important consideration than either skill tests, teacher judgment, or regularity of attendance. This may be because of the difficulty in measuring such intangible results as character and citizenship traits. 3) All but nine of the schools surveyed employ something in addition to regularity of attendance in arriving at a pupil rating.

No attempt was made to find out what type of skill tests were used, nor were teachers asked to indicate the type of pen and paper tests of knowledge found to be most useful. The term "teacher judgment" is very vague and from the survey it could not be determined on what this judgment was based. None of the respondents volunteered any information on how they measured traits of character and citizenship. The matter of specific instruments used to arrive at a rating could be made the basis of an independent study.

The teachers surveyed were next asked how often they rated pupils. It was felt that the frequency of rating would be influenced, to a certain extent, by the teacher's philosophy of measurement and perhaps by his philosophy of education. This belief was based on the hypothesis that pupils should be rated oftener than once each semester. This hypothesis is supported by the results as shown in Table III.

TABLE III
THE FREQUENCY WITH WHICH PUPILS ARE RATED

	Number of Schools	*Percentage*
1. Each period of four or five weeks	8	7.0
2. Each period of six or seven weeks	33	28.5
3. Each period of eight, nine or ten weeks	28	24.0
4. Each semester	37	32.0
5. Each year	3	2.5
6. Not at all	6	5.0
Total	115	100

It can se seen from the above table that sixty-nine of the schools surveyed, or sixty per cent, rate pupils more often than once each semester. Seven per cent rate pupils approximately four times during the semester, twenty-eight per cent rate three times during that period, twenty-four per cent rate twice, and thirty-two per cent rate only once each semester. More than half of the respondents apparently believe that four or six times a year is the desirable frequency.

This investigation next concerned itself with the question of granting credit toward graduation for courses satisfactorily completed in physical education. Two questions were asked regarding this problem. The first one asked whether such credit was being granted and the second asked respondents to indicate what proportion of the total graduation requirement could be earned by a normal physical education program. The extent to which graduation credit is being granted is indicated as follows:

	Number of Schools	*Percentage*
Grant credit	64	56
Do not grant credit	51	44
Total	115	100

Over one-half of the schools included in this survey grant credit toward graduation for work done in the physical education department, and of these ninety-one per cent allow from one-sixth to one-eighteenth of the total credits necessary for graduation to be earned in this department, but it should be added that in each of these schools pupils are assigned to physical education five periods per week.

On the whole, the situation regarding the granting of credit for physical work seemed to be an impossible goal to physical educators, and yet today over fifty per cent of the schools of the country recognize such credit, if the one hundred fifteen schools included in this survey are a fair representation of all the schools in the United States.

The difference in amount of credit allowed is probably accounted for by the difference in number of periods per week pupils are assigned to physical education. Regarding the number of periods per week that pupils are assigned to health and physical education, there is as much difference in existing practices as there is in most of the other divisions of this field.

A series of questions was asked of respondents concerning the amount of time pupils devoted to physical education.

TABLE IV
NUMBER OF PERIODS PER WEEK PUPILS ARE ASSIGNED TO PHYSICAL EDUCATION

Number of Periods	*Number of Schools*	*Percentage*
1	3	3
2	66	57
2½	11	10
3	8	7
4	6	5
5	13	11
Indefinite	8	7
Total	115	100

The typical high school as revealed by this survey assigns pupils to two periods of forty-five minutes in length each week to physical education activity. The plan of two periods per week is used by over one-half the schools and, strangely enough, the next most popular plan is that of five periods per week. Several of those listed as "Indefinite" said the number of periods per week depended on the individual needs of pupils, several adding that the number varied from one to five.

It seems evident that practically all pupils devote two or more periods each week to health and physical education or, stated as an average for all schools surveyed, two and three-tenths periods per week. Physical education teachers, however, believe that the periods ought to be more than double that number.

Teachers in the field, by a very large majority, advocate five periods per week. The smallest group suggests two periods, and of this group several qualified their response by saying "at least two", implying that they would prefer more than two periods per week. Among those listed as "Indefinite" are a number who said it would depend upon the individual needs of the pupil.

TABLE V
NUMBER OF PERIODS PHYSICAL EDUCATORS BELIEVE PUPILS OUGHT TO BE ASSIGNED TO PHYSICAL EDUCATION

Periods Per Week	*Number of Schools*	*Percentage*
2	6	5
3	14	12
4	10	9
5	73	64
Indefinite	12	10
Total	115	100

Thirteen schools require the passing of a swimmer's test before permitting pupils to graduate. The only exceptions to this rule are the pupils exempted because of physical disability, and they must present a certificate of exemption from their physician.

SUMMARY AND CONCLUSIONS

The program of physical education in the typical high school, as revealed by this study, seems to have the following characteristics:

1. The program consists of calisthenics, rhythm work, gymnasium games, track and field athletics, heavy apparatus work, intramural activities, and inter-scholastic team competition. Approximately one-half of the schools provide for corrective gymnastics and about one school in three includes swimming in their physical education programs. Two out of three schools teach hygiene and safety education.
2. Gymnasium class work is required of all pupils. Three schools out of four require hygiene and one-half of the schools make safety education mandatory.
3. Pupils are rated in physical education by a plan which is a combination of subjective and objective methods. This plan is very likely to include skill tests, teacher judgment, regularity of attendance, and desirable character and citizenship traits.
4. Reports of this rating are sent home to parents approximately three times each semester. The means of conveying this information to parents is the ordinary school report card. A record of the pupil's rating will be recorded on the pupil's permanent or cumulative record card.
5. Credit for physical education is allowed toward graduation in a little more than one-half of the schools and the amount of credit is likely to be one-sixteenth of the total graduation requirement.
6. Pupils are assigned to physical education two or three periods a week and in addition are required to register for hygiene once a week during two of the years they are in high school and for safety education once a week during one year. The physical education teacher in the typical high school feels rather strongly that pupils ought to be assigned to five periods of physical education a week, including hygiene and safety education.

CONCLUSIONS

The results of this investigation show rather clearly that programs of physical education are, to a very large extent, of the narrow and formal type with a great deal of emphasis on calisthenics, heavy apparatus, and rhythm work. It would seem that much could be done to vitalize the program by placing less stress on inter-scholastic sports such as football, basketball, and baseball and much more emphasis on those activities which will have greater value in later life. Such activities as swimming, tennis, golf, pitching horseshoes, hiking, badminton, archery, volleyball, and handball, as well as weight-normalizing, posture and foot exercises can be continued long after interest is lost in playing football and basketball.

All this can be accomplished because physical education is still very young and is not, as yet, tied down by tradition. Leaders in this field ought to take the necessary steps to make physical education a vital part of the life of every individual boy and girl.

It is seen further that, while nearly all pupils are rated in physical education, there is little evidence to indicate that the rating methods used are based on sound principles of education. Subjective judgment seems to enter into the determination of a rating to too great an extent while objective achievement plays too small a part. The use of achievement tests that would show pupils how far they have progressed toward clearly defined and thoroughly understood goals not only would do much to maintain a high degree of pupil interest, but also would go a long way toward elevating physical education in the eyes of pupils, parents, administrators and the public.

Lastly, the development of suitable achievement tests is not a simple task and will probably require the combined efforts of many people, but unless teachers of physical education are willing to devote time and energy to carry on research and experimentation in an effort to develop adequate tests the solution to this problem will be delayed indefinitely.

BOOK REVIEWS

Crandall, Latham A., Jr., M. D. *An Introduction to Human Physiology.* (Philadelphia: W. B. Saunders Company, 1942. Third Edition.) 388 pages, $2.25.

New material has been added to this fine text-book. An entirely new chapter on Nutrition, new material on metabolism and on the problems of respiration in relation to high altitude flying have been added. This book will undoubtedly continue to enjoy wide use as a textbook for students pursuing courses in physical education, nursing, and other professional fields.

RUDOLPH R. SCHRIEBER.

Dagrosa, John (Ox). Functional Football. (Philadelphia: W. B. Saunders Company, 1942.) 321 pages, $3.25.

This book in its second edition is completely revised. The author is a nationally known coach of college and professional football experience.

Diagrams and pictures are appropriately and freely interspersed in the material which covers: History of football, Offensive fundamentals, Defensive fundamentals, Offense strategy, Defense strategy, and General coaching considerations. The T formation is given full consideration and the distinguishing features of six-man football are outlined. This text is intended for the young coach and his squad. It is a commendable book for credit courses in football techniques.

KARL W. BOOKWALTER.

LaPorte, William Ralph: Hunt, Charles Henry: and Eastwood, Floyd R. *Teaching Safety Education in Secondary Schools.* (New York: Prentice-Hall, Inc., 1942. 179 pages. $1.50.

The need for safety education and the responsibility of the schools for its accomplishment is shown. The organization of the program and its correlation with arts and science, practical arts, and physical education curricula is explained. Special emphasis is placed upon safety controls in physical education, traffic safety and driver training, and first aid. Safety regulations and codes are discussed and a plan for a school safety organization is outlined as are suggested courses of safety for junior and senior high schools. The book should be a helpful text for secondary schools.

KARL W. BOOKWALTER.

Meyer, Margaret H. and Schwartz, Marguerite M. *Team Sports for Women.* (Philadelphia: W. B. Saunders Company, 1942. 385 pages. $3.50.)

Techniques, tactics, and reliable drills for the six major team sports for women are presented clearly and completely. It is written for both beginning and advanced players and for teachers in training. Coaches of women's teams will find this valuable in providing interesting and novel methods of teaching and practicing various elements of the sports.

Basketball, hockey, soccer, softball, speedball, and volleyball are the sports covered. The authors have presented in a clear and concise manner the history, equipment and care, safety factors, officiating, object of the game, skills and tactics, body mechanics, and coaching instructions on offensive and defensive play of the six sports mentioned.

RUDOLPH R. SCHREIBER.

Morrison, Whitelaw Reid and Chenoweth, Lawrence B. *Normal and Elementary Physical Diagnosis.* (Philadelphia: Lee Febiger, 1941. Third Edition. 368 pages.)

This text-book is intended by the authors for "the use of students and teachers of physical and health education" and should be used as a reference text in studying the signs and symptoms of disease and disability as they affect children and youth.

The first three chapters are concerned with the organization and details of the health examination. Chapter IV considers the significance of height and weight in relation to health and growth. There is an excellent chapter on nutrition and one on health and physical fitness tests. The chapter on posture is well done. The remaining 14 chapters are devoted to discussions of the numerous diseases and injuries that children and young adults are exposed to. Symptoms and signs are listed in detail and their diagnostic significance explained. Simple treatments are sometimes suggested. In other conditions the treatment usually given by the physician is mentioned. In still others the statement is made that the condition should be referred to a physician for treatment.

In parts of the book the descriptions are in non-technical language, or technical terms are explained. In much of the material, however, the student is presumed apparently to have a considerable familiarity with the technical terms of medicine and considerable anatomical and physiological knowledge.

The subject matter is accurate and up-to-date and the numerous illustrations are clear and well chosen, and help to make the text more understandable.

The book should be valuable to college students and teachers of hygiene, who have had courses in anatomy, physiology, and bacteriology, for use as a reference book in a course in health education taught by a physician with teaching experience. It should be useful also in orienting physicians who plan to enter the field of school health.

JOHN L. C. GOFFIN, M.D.